AUG 6 1923

This Issue Exceeds 80,000 Copies

THE JOURNAL

OF THE

American Medical Association

Annual Subscription, $6.00 — PUBLISHED WEEKLY — Single Copies, 20 Cents

VOLUME 80, No. 6 — 535 North Dearborn Street, CHICAGO, ILL. — FEBRUARY 10, 1923

CONTENTS AND SUBJECT INDEX

The Etiology of Pellagra. James W. Jobling, M.D., New York, and Lloyd Arnold, M.D., Chicago.....365

Roentgenography of Urinary Tract During Excretion of Sodium Iodid. Earl D. Osborne, M.D.; Charles G. Sutherland, M.B. (Tor.); Albert J. Scholl, Jr., M.D., and Leonard G. Rowntree, M.D., Rochester, Minn..368

Acute Barbital (Veronal) Poisoning. W. Cole, M.D., Anaheim, Calif...373

An Operation for Ingrowing Toe Nails. Grover C. Ney, M.D., Baltimore..374

Fibrolipoma of Left Labium Majus. William R. Lovelace, M.D., Albuquerque, N. M.....375

Chronic Obstructive Jaundice (Noncalculous). W. A. Downes, M.D., New York.....377

Lesions of the Paratrigeminal Area. Loyal E. Davis, M.D., Chicago...380

Torsion of Uterine Adnexa. M. Cohen, M.D., New York.....382

The Precipitin Reaction for Syphilis. W. B. Moody, M.D., Omaha.....383

The Use of Creatinin as a Test of Renal Function. Ralph H. Major, M.D., Kansas City, Kan.....384

The Precipitin Reaction of Thyroglobulin. Ludvig Hektoen, M.D., and Kamil Schulhof, M.D., Chicago...386

Dengue Fever in Louisiana. L. C. Scott, M.D., New Orleans.....387

Diagnosis and Relief of Sterility. A. H. Curtis, M.D., Chicago.....393

Protein Sensitization. A. G. Gould, M.D., Ithaca, N. Y.....394

CLINICAL NOTES, SUGGESTIONS AND NEW INSTRUMENTS

A "Nutrition" and Intelligence Quotient Slide Rule. C. M. Kelley, M.D., Concord, N. H.....397

The Rubin Tubal Insufflation Test in Primary Sterility. Murray L. Brandt, M.D., New York.....398

Intravenous Needle with Vacuum Cup. H. W. Abelmann, M.D., Chicago..399

Ether Intramuscularly for the Relief of Hiccup. Charles L. Gibson, M.D., New York.....399

Atypical Surgical Mastoiditis: Report of a Case. J. L. Johnson, M.D., Presque Isle, Maine.....399

A New Duodenal Tube and Tip. N. Philip Norman, M.D., New York 400

SPECIAL ARTICLE

The Care and Feeding of Infants (Continued).....400

EDITORIALS

Hygeia: Are You for It?.....402

The Histologic Background of Bronchial Asthma.....402

Announcements on the Cause of Epidemic Influenza.....403

Pleural and Peritoneal Pains.....403

Vital Statistics in Prognosis.....404

CURRENT COMMENT

The Patent Office—A Federal Rip Van Winkle.....405

Bayer 205.....406

Strychnin and Disturbances of the Vision.....406

(Subject Index on next page)

Entered as Second-Class Matter, June 25, 1885, at the Postoffice at Chicago, Ill., under Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized on June 14, 1918. If undeliverable, return postage is guaranteed

Copyright, 1923, by the American Medical Association NEXT ANNUAL SESSION, SAN FRANCISCO, JUNE 25-29, 1923

BOOKS

"Cultivate above all things a taste for reading."—*Lord Sherbrooke.*

—

But select your books with care.

JUST READY—NEW (2d) EDITION

Crile on the Thyroid Gland

This work deals entirely with the *Thyroid Gland*—every phase of it. Each phase is presented by that member of the staff best qualified, because of specialized work to discuss that particular phase. The contributions are arranged in sequence, starting with general papers, and then taking up in order function, diseases and pathology, diagnosis, prevention, preoperative treatment, surgical technic, postoperative treatment, summary, and statistics. Full and definite details for anoci-association and the use of nitrous-oxid-oxygen are given. The work is *strictly clinical* throughout, the contributions themselves telling the story of diagnosis and treatment, applying, in the interpretation of the symptoms in diagnostic terms, the years of experience in history-analysis, the technic of the laboratory, the sense of observation. Operative technic, of course, is given in clear, definite detail, and the many step-by-step illustrations further stress the important points. To this edition have been added chapters on Parathyreoprival Tetany, Transfusion of Blood as a Therapeutic Measure in the Management of Bad Risk Goiter Patients, and Post-Hospital Management of Goiter Patients.

The Thyroid Gland. By George W. Crile, M.D., and Associates, Cleveland, Ohio. Octavo of 292 pages, with 106 figures, containing 179 illustrations. Cloth, $5.00 net

SAUNDERS, *Publishers*

See Page 3

SUBJECT INDEX TO THIS ISSUE

The letters used to explain in which department the matter indexed appears are as follows: The Star (*) indicates an Original Article; "E," Editorial; "C," Correspondence; "T," Therapeutics; "Ml," Medicolegal; "P," Propaganda for Reform; "ME," Medical Economics.

A. M. A. San Francisco Session..... 407
Abdomen, aches in..... 441
surgery, heart failure after..... 439
Abortion, febrile 439, 442
Academy of Medicine of Atlanta, Ga..... 407
Acidosis among stokers..... 443
and narcosis..... 440
Anaphylaxis, diagnosis of..... 440
Anemia, pernicious 438, 443
Anesthesia, local and spinal..... 434
Aneurysm, traumatic, of spleen..... 433
Angiospasms in arteritis and claudication.. 436
Appendicitis caused by ascarids....C-422, 443
Arsphenamin, biologic action of..... 429
injuries 440
Ascites, percussion in diagnosis of..... 435
Ataxia, hereditary 440
Auenbrugger bicentennial 444
Autohemotherapy in pregnancy dermatitis. 435
Bacillus typhosus injected into gallbladder. 431
Back, aches in..... 441
Backward, law on social adaptation of..... 435
Barbital poisoning.....*373
Basophilic inclusions in neutrophils..... 434
Bayer 205 .....E-406
Bile acids in serum and urine..... 441
Bile duct, occlusion, metabolism in..... 442
Blood platelets, immunologic experiments with 430
pressure, high, after electric shock.... 439
ratio between hemoglobin and corpuscles. 444
relation of speed of sedimentation to specific gravity of plasma and erythrocytes 440
sugar, test for..... 444
Bone, osteoperiosteal grafts..... 434
Book Notices 423
Books Received .....**Adv. page 28**
Botulism, experimental, in dogs..... 430
Brain, injury of..... 439
syndrome from injury of centrum ovale. 438
Bronchial glands, tuberculosis of..... 442
Burns, epinephrin in..... 438
Carotid gland, tumors of..... 436
Casein, dietetic treatment with..... 440
Cerebrospinal fluid in disease of fundus.. 432
reaction with paregoric in paresis..... 435
Cesarean section, atonic hemorrhages in.. 443
Porro's operation 437
Chancre, syphilitic, early diagnosis of.... 435
treatment before appearance of..... 436
Children, epituberculous infiltration in.... 443
food requirement of..... 442
Cholecystogastrostomy for jaundice.....*377
Colorimeter, new, for bicolorimetric work.. 429
Colors, discrimination of..... 440
Conjunctiva, treatment of diseases of.... 441
Constriction, blood crisis after..... 435
Contracture, ischemic..... 439
Correspondence 421
Cranium, treatment of defects of..... 438
Croup, influenzal, in children..... 440
Cystadenoma of retroperitoneal origin.... 434
Deaths 418
Dengue fever in Louisiana.....*387
Dermatitis, autohemotherapy in..... 435
Diabetes, dietetic treatment of..... 444
levulose in..... 434
syphilitic origin of..... 436
Diphtheria antitoxin, action on new-born. 442
Diverticulum, Meckel's 441
Drugs, coloration of..... 417
Duodenal tube and tip, new.....*400
Duodenum, tardy perforation of..... 439
ulcer 433
Dura, treatment of defects of..... 438
Dysmenorrhea, treatment of..... 442
Echinococcosis of spleen..... 436
Electric shock, hypertension after..... 439
Endocarditis lenta 438
Eosinophilia in children..... 442
Epinephrin in burns..... 438
Epithelium implants..... 438
Erythrocytes, influence of spleen on..... 443
speed of sedimentation and specific gravity of plasma and erythrocytes.. 440
Ether in atonic hemorrhages..... 442
Ethmoid, relation of optic nerve to..... 432
Fallopian tube, patency of.....*398
Fetus, causes of death of..... 443
Fibrolipoma of left labium majus.....*375
Fistulas, bronchial..... 439
Flea bites, clinical aspect of..... 442
Food requirement of children..... 442
Foreign Letters 414
Gallbladder, results of injection of bacillus typhosus into 431
Goiter, recurrence of..... 438
Gonococci, medium for..... 441
Gout and the kidneys..... 440
Government Services 413
Grafts, osteoperiosteal..... 434
Granuloma inguinale, articles on..... 422
Heart, experimental compression of..... 443
failure after operations..... 439
ruptured 433
Hemoglobin, ratio between corpuscles and. 444
Hemorrhage, arrest of, in surgery..... 438
Herniotomy 433
Hiccup, ether intramuscularly for.....*399
Hodgkin's disease, Pel-Ebstein type of.... 432
Humerus, supracondylar fracture of..... 439
Hydrocephalus, acquired chronic..... 434
Hygeia: are you for it?.....E-402
Hygiogenesis 440
Hypnosis, research on..... 443
Hypospadias, treatment of..... 436
Immunologic experiments with human blood platelets 430
Infants, care and feeding of.....*400, C-421
diagnostic cutaneous reactions in..... 440
nutritional disturbances of..... 440
welfare 437
Influenzal croup in children..... 440
epidemic, cause of.....E-403
Intermittent claudication, angiospasms in. 436
Intestinal flora on diet deficient in vitamin A..... 431
incarcerated in slit of mesentery..... 439
loss in weight in diseases of..... 438
Intubation, limits of..... 440
Jaundice, cholecystogastrostomy in.....*377
Jenner, Edward 416, 425
Kidney function, creatinin as test of....*384
Labor, acute inversion in..... 425
Larynx, fatal x-ray injuries of..... 441
Legs, ulcers of..... 441
Levulose in diabetes..... 434
Lipomatosis, myxedema in..... 439
Liver, floating, operation for..... 439
function test, chromocholoscopy as..... 440
function tests in children..... 442
function test, Widal's..... 441
Lung, epituberculous infiltration in...442, 443
syphilis of.....429, 433
Lymphatics, research on origins of..... 439
Magnesium, assimilation of..... 429
Marriages 418
Mastoiditis, atypical surgical.....*399
Medical Education, Registration..... 423
Medicolegal 426
Mesentery, incarceration of intestine in.. 439
Metabolism, basal, standards..... 430
in congenital occlusion of bile duct..... 442
Myopathies, progressive 435
Myositis, progressive ossifying..... 439
traumatic ossifying 444
Myxedema in lipomatosis..... 439
Nails, lilac arch on, in syphilis..... 435
Narcosis and acidosis..... 440
Needle, intravenous, with vacuum cup..*399
Nerve, optic, relation of, to sphenoidal and posterior ethmoidal sinuses..... 432
lesions of paratrigeminal area.....*380
Neuroses, structural basis of..... 431
Neutrophils, basophilic inclusions in..... 434
New and Nonofficial Remedies..... 401
News 408
Nutrition disturbances of infants..... 440
and intelligence quotient slide rule.....*397
Operation, major, definition of..... 422
Osteochondritis deformans juvenilis..... 438
Otitis media in new-born..... 435
Pancreas, acute edema of..... 439
Paralysis, general, reaction of spinal fluid with paregoric in..... 435
general, treatment of..... 435
Paratrigeminal area, lesions of.....*380
Pasteur centennial 416, 443
Patent office—a federal Rip Van Winkle.E-405
Pellagra, etiology of.....*365
Percussion in diagnosis of ascites..... 435
modified method of..... 440
Peritoneal pains E-403
Phosphorus, assimilation of..... 429
Physostigmin, therapeutic use of..... 434
Pituitary tumor of 14 years' standing.... 435
Pneumothorax, artificial 427
Pons, bilateral posterior pontine syndrome. 435
Precipitin reaction for syphilis.....*383
reaction of thyroglobulin.....*386
Pregnancy, dermatitis of, hemotherapy in. 435
ectopic 428
prenatal hygiene 432
Propaganda for Reform..... 420
Protein sensitization.....*394
therapy in febrile abortion..... 442
Pseudohermaphrodism and sterility..... 443
Psychosis, senile..... 431
structural basis of..... 431
Purpura, primary, in children..... 432
Pyelitis, treatment of..... 438
Pyelolithotomy 437
Queries and Minor Notes..... 427
Rachitis and growth.....441, 442
in infants 442
Radiotherapy in gynecology..... 436
Reactions, diagnostic cutaneous, in infants 440
Rectum, hemorrhagic erosions of..... 441
Redlich-Fisher miliary plaques..... 431
Rheumatism, active immunization against. 440
Roentgen-ray injuries of larynx, fatal.... 441
sickness and cachexia..... 439
Rumpel-Leede's phenomenon..... 441
Sachs-Georgi test, results of..... 430
Scabies, treatment of..... 422
Scalp, scar-forming affections of..... 436
Serodiagnosis 430
Serum, bile acids in..... 441
Skin, mixed affections of..... 436
Smoking, effects of, on function..... 430
Snake bites, experimental research on.... 434
Spastic conditions, treatment of..... 440
Sphenoidal sinuses and optic nerve..... 432
Spirochetes recurrentis and arsphenamin.. 440
Spirochetosis, bronchial..... 444
Spleen, echinococcus disease of..... 436
influence on erythrocytes..... 443
Splenomegaly, familial 444
Staphylococci, serologic classification of.. 433
State Board Examinations..... 423
Sterility, diagnosis and relief of.....*393
pseudohermaphrodism as cause of..... 443
Rubin test in.....*398
Stomach, acidity of, estimation of..... 443
acute atony of..... 438
function of muscles of..... 427
function tests in infants..... 442
ulcer, surgical treatment of..... 441
ulcers, postoperative, peptic..... 437
Streptococcus, hemolytic, epizootic in cats caused by..... 431
Strychnin and disturbances of vision....E-406
Syphilis, abortive treatment of..... 436
and complement..... 429
congenital, with symptoms of hereditary ataxia 440
early diagnosis and treatment..... 441
hereditary and progressive myopathies.. 435
lilac arch on nails in..... 435
precipitin reaction for.....*383
Sachs-Georgi test for..... 430
treatment before appearance of chancre. 436
Thymus, enlarged..... 433
Thyroglobulin, precipitin reaction of.....*386
Toe nail, ingrowing.....*374
Tonics and Sedatives.....**Adv. page 22**
Tonsillectomy, consequences of..... 444
Trachoma, radium for..... 441
Trichophytosis on extremities..... 440
Trigeminal area, lesions of.....*380
Tuberculosis bacilli, staining of..... 442
bacillus, action of cod liver oil on..... 428
bacillus, preparation of nucleic acid from 429
conjugal pulmonary 444
kidney, fibrotic type of..... 434
miliary, primary foci, and immunity.... 441
pulmonary, leukocyte count in..... 442
pulmonary, effect of bed rest in..... 428
pulmonary, laryngoscopy in..... 428
pulmonary, sodium morrhuate in..... 428
war epidemiology of..... 442
Turpentine in adnexal affections..... 443
Typhoid at Barcelona..... 437
Ulcers, callous, in legs, treatment of..... 441
Urethrotomy 437
Urinary tract, manifestations of disease of roentgenography during excretion of sodium iodid 437
Urine, amino-acid fraction of, in infants.. 442
bile acids in..... 441
Uterus adnexa, torsion, before puberty...*382
adnexal affections, turpentine in..... 443
adnexitis and blood picture..... 443
cancer surgery and x-rays in..... 438
fibromyoma, roentgenotherapy of..... 427
inversion, acute, in delivery..... 435
myomas, localization of..... 435
prolapse, treatment of..... 444
Varicocele, treatment of..... 437
Vena cava, superior, ruptured..... 433
Vision, strychnin and disturbances of....E-406
Vital statistics in prognosis.....E-404
Vitamin A, diet deficient in..... 431
B, rôle of, in nutrition..... 429
Vulva, fibrolipoma of.....*375
Wassermann reaction in obstetrics..... 436
Wound, active epithelial implants on wound surfaces by Pels-Leusden's method... 438
Wrist, fracture of..... 439

BOOKS Medical Works of All Publishers. All American and English Monographs. One Order, One Remittance. Get Our Latest Bulletin. CHICAGO MEDICAL BOOK CO., Congress and Honore Sts., Chicago

HYGEIA THE NEW A. M. A. MAGAZINE OF HEALTH—For Physician and Layman
Special Advance Subscription Offer Now Open See Page 17 8 MONTHS FOR $1.00

The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 80, NO. 6 CHICAGO, ILLINOIS FEBRUARY 10, 1923

OBSERVATIONS AND REFLECTIONS ON THE ETIOLOGY OF PELLAGRA*

JAMES W. JOBLING, M.D.
NEW YORK
AND
LLOYD ARNOLD, M.D.
CHICAGO

It would be useless to enumerate the various views advanced to explain the cause of pellagra. Most of them have been discussed repeatedly, editorially, and in special articles in THE JOURNAL during the last few years. The idea that the disease is due to a faulty diet has been held almost from the beginning by many of those investigating its nature. At first, there was very little positive evidence in support of this view; but the results of the preventive and feeding experiments conducted by Goldberger,[1] and his associates, in orphanages in the South and elsewhere, were sufficiently suggestive to convince these workers that pellagra is due to a lack of the proper kind of proteins in the diet.

Other observers in this country[2] besides ourselves[3] are not convinced that this explanation will account for certain epidemiologic observations. In addition, we have seen pellagra patients whose animal protein intake previous to the onset of the disease apparently was above criticism.

It is not easy to explain by the food deficiency theory why the disease should have increased so rapidly from 1909 to 1913, and then rapidly declined, so that now it is rare in localities where formerly it was very prevalent. It is difficult to believe that the diet of people living in an area as large as that of our Southern states has changed radically twice during a period of seven or eight years; and, even if we grant this possibility, this increase and decrease during a limited period of time fits in more readily with our knowledge of the course of an infectious disease.

It has been stated that this decrease in pellagra after 1913 is due to the fact that the average person in these communities received larger incomes and had better food; but it is doubtful whether the larger incomes have compensated for the decreased purchasing value of the dollar. The officials of the Public Health Service evidently had this in mind last spring when they predicted that there would be a great increase in pellagra the past summer. The great increase did not occur, however, at least not in the localities we studied.

It is customary to say that a faulty diet may cause disease (1) through an insufficient amount of all essential substances, resulting in general malnutrition, or (2) from the lack of some one essential—vitamin, amino-acid or inorganic substance—the others being present in sufficient amounts. It is possible that excessive amounts of one or more of the essentials may make a diet faulty, even though the others are present in sufficient quantity. Thus, an excess of carbohydrates with just the necessary amount of proteins, or the reverse, may furnish an excellent culture medium in the intestinal tract for an organism which, under these circumstances, would become pathogenic because of the production of unusual amounts of toxins; while with a properly balanced diet such an organism would probably be inoffensive.

Hirschler[4] was apparently the first to observe that certain carbohydrates—sucrose, dextrin and starch—inhibited intestinal putrefaction, and this observation has been confirmed by others, including Herter,[5] Kendall,[6] and Rettger and Horton.[7] In the later work, microscopic and cultural methods were used in determining the changes in bacterial flora of the intestine caused by changes in diet. Thus, the results obtained by Goldberger in his preventive experiments do not disprove the possibility that pellagra may be due to an infectious agent; for it is obvious that the change to a larger amount of protein, with a decrease in carbohydrates, would make conditions less favorable for the development of an organism requiring large amounts of the latter substance.

The Italian investigators were probably the first to note changes in the intestinal flora of pellagra patients. They observed an increase in hyphomycetes, and supposed that these molds were in themselves toxic, or produced a toxin when grown on corn. They were never able to identify any one of these molds as a causative factor in pellagra.

Our general impression of the disease would lead us to the conclusion that pellagra is not a deficiency disease, comparable to beriberi and scurvy, but one in which a definite intoxication, arising most probably from the intestinal tract, forms the basis of the pathologic condition.

The point has been made repeatedly that the failure of physicians, nurses and other attendants of pellagrous patients to develop the disease indicates that it is not due to a specific organism. Those making this state-

* From the Department of Pathology, Columbia University College of Physicians and Surgeons, New York, and the Department of Pathology, Loyola University School of Medicine, Chicago.

1. Goldberger, Joseph: Relation of Diet to Pellagra, J. A. M. A. **78**: 1676 (June 3) 1922.
2. Siler, J. F.; Garrison, P. E., and MacNeal, W. J.: Pellagra and Sewage Disposal, Arch. Int. Med. **19**: 683 (May) 1917.
3. Jobling, J. W., and Petersen, W. F.: Epidemiology of Pellagra in Nashville, J. Infect. Dis. **21**: 109 (Aug.) 1917.
4. Hirschler, A.: Ztschr. f. physiol. Chem. **10**: 306, 1886.
5. Herter, C. A.: Brit. M. J. **2**: 1847, 1897.
6. Herter, C. A., and Kendall, A. J.: J. Biol. Chem. **7**: 203, 1908.
7. Rettger, L., and Horton, G. D.: Centralbl. f. Bakteriol., 1, Orig. **73**: 362, 1914.

ment, however, apparently do not take into consideration the question of individual susceptibility, personal hygiene, food, etc. Thus, it is doubtful whether tuberculosis is more frequent among attendants in sanatoriums for tuberculous patients than in other hospitals. Brown [8] states that during the thirty-six years the Trudeau Sanitarium has been in existence only one among many hundreds of employees has developed tuberculosis despite the demonstrated fact that they were continually exposed to infection. He also states that for years no native of Saranac Lake (population about 5,000) has died of pulmonary tuberculosis. If the causative agent of tuberculosis were not so well known, Brown's observations might equally well be used to support the assertion that tuberculosis is not due to a specific organism. It is also well to remember that the attendants in leprosariums practically never develop leprosy.

It seems rather a curious fact that the influence of light on the development and progress of the disease has been almost completely ignored during the last few years, though it is a common observation that the skin lesions are most prevalent on the exposed parts of the body and develop usually in the spring or summer months, following exposure. The majority of our patients ascribed the skin changes to sunburn, and Enright [9] and Bigland [10] have recently referred in some detail to the influence of the sun on the skin lesions. We believe that such patients do better when kept in a dark room.

It is now eighteen years since Heinrich von Tappeiner [11] and his associates, Raab and Jodlbauer, observed that certain fluorescent dyes developed marked toxicity for infusoria when directly activated by light rays. These investigators developed the field to a considerable extent, noting the effect on laboratory animals, on tissues and ferments and on bacteria. Apart from the general biologic importance of these investigations, a certain clinical bearing was found, and the dermatologic field offered particularly alluring applications in the possible explanation of some of the still hidden causes of various dermatoses.

Among the problems attacked were those of fagopyrismus and hydroa aestivale. In the former, a fluorescent substance has been isolated from buckwheat which is able to sensitize animals to light,[12] while alcoholic soluble fluorescent and photodynamic substances have been isolated by Gay and McIver [13] from corn, rye, oats and buckwheat. In hydroa aestivale, Hausmann [14] was able to demonstrate the presence of an active photodynamic substance, hematoporphyrin, in the urine.

The suggestion that pellagra might be a photodynamic intoxication was made almost simultaneously by four different investigators: Hausmann,[14] Lode,[15] Horbaczewski [16] and Raubitschek.[17] Their experiments, also those of Umnus,[18] were made with photodynamic substances obtained from corn; but, since in this country quite a number of those developing pellagra have been consuming only a minimum of corn products, we must obviously seek some other explanation. Nor must we fall into the error of assuming that the mere entrance of photodynamic substances into the intestinal tract is sufficient to set up a light sensitization, for chlorophyl (as shown by Hausmann, a strongly fluorescent and photodynamic substance), is, of course, a common constituent in the normal diet.

That human beings may be made hypersensitive to photodynamic substances is shown by the interesting experiment of Meyer-Betz,[19] who sensitized himself with hematoporphyrin. He found that exposure to sunlight caused marked edema and erythema of the exposed parts—face, hands, neck, etc.—indicating in a suggestive manner that a photodynamic intoxication can, under certain conditions, be induced in the human being. It is interesting to note that he remained hypersensitive for at least six weeks, though no traces of the sensitizing substance, hematoporphyrin, could be found after seventy-two hours.

For several years, we have been impressed with the possibility that pellagra may be due to a photodynamic substance produced by an organism located in the intestinal tract. The observations supporting the low protein theory may be readily explained by the assumption that this hypothetic organism can produce the light sensitizing substance only when growing in a favorable medium, consisting of an excess of carbohydrates. Such a theory would explain not only the skin manifestations of the disease, but also the results obtained with a high protein diet, and the epidemiologic observations made by ourselves and others. It would also explain why healthy individuals with a normal diet failed to develop the disease when fed with infected material.

The point has been made that negroes, because of their dark skin, should not be affected by pellagra if it is due to the action of a photodynamic substance. Those holding this view apparently believe that the dark skin affords complete protection against the light rays. Such is not the case, as those living in the South are aware, since negroes, though less susceptible than white people, also suffer from overexposure to the summer sun. We have found that dark colored mice are susceptible to the action of hematoporphyrin, though requiring larger doses than white mice; while Hess and his associates,[20] in their study of the influence of light in rickets, found that the ultraviolet rays protected both dark and white rats from this disease, but that the former required longer exposures to the rays. Thus, the protection afforded by a dark skin is relative, and not absolute.

These studies were begun in 1919 in Nashville, Tenn., but the disease became so rare that in 1922 the work was transferred to Memphis, Tenn. Here, conditions were little better than at Nashville. During the summers of 1920, 1921 and 1922, we saw only sixteen patients with active symptoms of pellagra, and, as the technic described below was not developed until the latter part of 1920, we might properly confine this report to the work done in the summers of 1921 and 1922, during which we saw only nine acute cases. This striking decrease in pellagra in the localities where we were working explains why we are making the present

8. Brown: Am. Rev. Tuberc. **5**: 518, 1921.
9. Enright, J. D.: Lancet **1**: 998 (May 8) 1920.
10. Bigland, A. D.: Lancet **1**: 947 (May 1) 1920.
11. Von Tappeiner, H.: Verhandl. d. Kong. f. inn. Med. **21**: 374, 1904; Deutsch. Arch. f. klin. Med. **80**: 427, 1904; ibid. **82**: 217, 1905.
12. Oehmke, W., and Zuntz, N.: Centralbl. f. Physiol. **22**: 685, 1909.
13. Gay, D. M., and McIver, M. A.: Am. J. Trop. Med. **2**: 115 (March) 1922.
14. Hausmann, W.: Wien. klin. Wchnschr. **23**: 1287, 1910.
15. Lode: Wien. klin. Wchnschr. **23**: 1160, 1910.
16. Horbaczewski, J.: Centralbl. f. Bakteriol. 1, Orig. **58**: 317, 1911.
17. Raubitschek, H.: Wien. klin. Wchnschr. **23**: 963, 1910.
18. Umnus, O.: Ztschr. f. Immunitätsforsch. u. exper. Therap. **13**: 461, 1912.
19. Meyer-Betz, F.: Deutsch. Arch. f. klin. Med. **112**: 476, 1913.
20. Hess, A. F.; Unger, L. J., and Pappenheimer, A. M.: Proc. Soc. Exper. Biol. & Med. **19**: 238, 1922.

incomplete report, as the expense and time entailed in further work does not seem justified at this time. We realize that the evidence submitted is not conclusive, but hope that others, more fortunately situated, may become sufficiently interested to make additional studies along these lines.

We first endeavored to extract photodynamic substances from the feces and urine, but without avail. It is known, of course, that certain of the bile pigments are fluorescent, and possibly photodynamic; but the suggestive character of some of our epidemiologic findings caused us to ignore these for the present.

Our next efforts were devoted to an attempt to isolate organisms able to produce photodynamic substances, and here we were more successful. In the beginning, it was thought best to concentrate our work on the fungi of the intestinal tract, as the Italian observers had noted an increase of these organisms in the feces of pellagra patients. Raulin's medium[21] was used at first, but this was subsequently replaced by a medium used by Currie[22] for studying the production of citric acid by fungi. This synthetic medium was easily made, and we were able to make very thick seedings on the plates, since few of the intestinal bacteria will grow on it. For the purpose of limiting the number of organisms to be investigated, they were transferred from the plates to test tubes containing the Currie medium, to which had been added 3 per cent. potassium iodid, 1 per cent. starch and 2 per cent. agar. The potassium iodid and starch were added because mixtures containing a photodynamic substance, potassium iodid and starch turn blue when placed in a bright light, while the controls kept in the dark remain unchanged. Synthetic mediums containing no protein must be used for this purpose, as proteins inhibit the reaction. It was soon found that apparently any organism producing oxalic acid would give blue colonies on this special medium, and subsequently we found that oxalic acid itself was strongly photodynamic. This medium was of great assistance to us, however, for with its aid we were able to discard many of the organisms isolated.

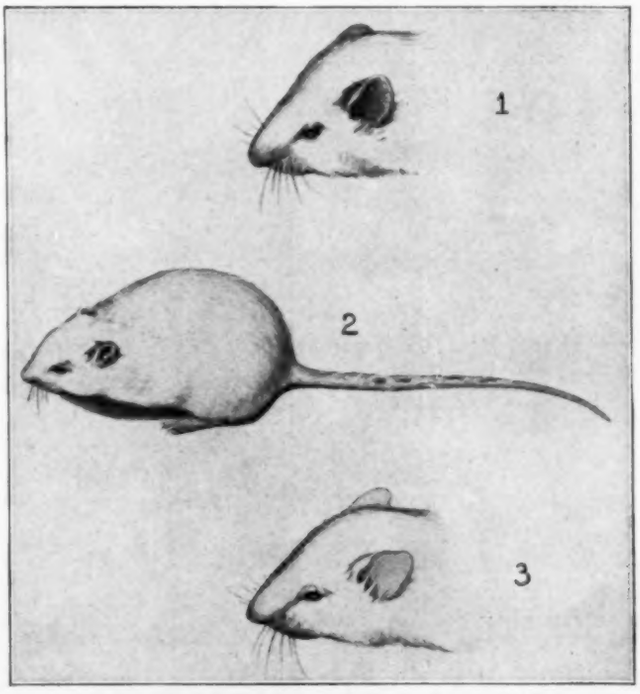


Fig. 1.—Appearance of ears, showing reddening and thickening following exposure to sun after two injections of photodynamic extracts.
Fig. 2.—Appearance following several injections of active substance and four days' exposure to bright light, showing scaly tail, loss of ears and some thinning of hair over face.
Fig. 3.—One of controls, kept in same cage during light exposures.

The organisms giving blue colonies were then transferred to flasks containing a fluid medium of the same composition, placed in the incubator at 30 C. for two to three weeks, and then examined for fluorescence. Cultures showing fluorescence were finally examined for their photodynamic action. It was found that the fluorescence is brought out more strongly in the cultures when the medium is rendered slightly alkaline. By the adoption of this technic, it is possible that we have missed organisms which belong to this group, but the large number isolated made it essential that we limit the scope of the work.

During the summer of 1920, when we were developing our technic, many of our plates were overgrown with either bacteria or fungi, but we obtained from the fungi isolated one strain that produced a strongly fluorescent substance. During the summer of 1921, we studied three acute cases and six so-called chronic cases. In some of the latter, the subjects had been free from the disease for a year; some presented doubtful recurrences; others, except for their clinical history, gave no indications that they had ever suffered from the disease. From this group, three positive cultures of the same organism were obtained; two pure cultures from the three acute cases and one mixed culture from a doubtful case. The mixed culture in the fluid medium became actively fluorescent, but we were unable to separate the active strain. This difficulty was encountered in three instances, and will be appreciated by those who have worked with mixed cultures of fungi.

At Memphis, we studied five acute, four subacute and fifteen so-called chronic cases. Most of the latter group were examined because we could not obtain active cases. Of this group, two pure cultures and one mixed culture were obtained from the five acute cases, one pure culture from the four subacute cases, and one mixed culture from the fifteen so-called chronic cases.

During the fall of 1921, a patient with pellagra was admitted to the Presbyterian Hospital, New York. This case, while atypical in some respects, presented symptoms which caused us to make a definite diagnosis of pellagra, and this diagnosis was confirmed by others who are familiar with the disease. In this case, the same fluorescent fungus was isolated repeatedly from the feces, and when the patient subsequently came to necropsy, the organism was isolated from the middle and lower portion of the small intestine and from the large intestine.

Thus, during the summers of 1921 and 1922, strains of fungi producing fluorescent substances were isolated from the feces in five of nine acute cases, including the New York case, one of six subacute cases, and two of twenty-three so-called chronic cases. In the latter group, some of the subjects had not presented any symptoms of the disease for more than a year. At Nashville and at Memphis, fifty nonpellagrous persons were studied, and in no instance did we isolate a

21. Lutz, L., and Guéguen, F.: Bull. Soc. mycol. de France **17**: 83, 1901.
22. Currie, J. N.: J. Biol. Chem. **31**: 15 (July) 1917.

fluorescent fungus. A series of individuals were studied in New York as controls on the case seen here, but all were negative.

The fungus apparently belongs to the *Aspergillus glaucus-repens* group. More intensive studies of its biologic properties are now being made in two separate institutions, with the idea of determining its identity. The fungus may prove to be a well known organism that becomes pathogenic only under certain limited conditions.

The fluid medium in which the fungus has been growing for from two to three weeks becomes light brown and is strongly acid in reaction. When the medium is made slightly alkaline, it becomes strongly fluorescent. Frequently, a red pigment is also produced. The fluorescent substance was soluble in nearly all of the lipoid solvents. It can be readily extracted from the medium by means of ether or ethyl acetate. The medium must be acid in reaction at the time of extraction with the solvent. From the solvent, it can be easily removed by means of weak alkalis. In these alkaline washings, which are, of course, now free from most of the other constituents of the medium in which it has been growing, the fluorescence is very marked.

Photodynamic experiments were conducted with the extracts obtained with ether or ethyl acetate. The ether extracts obtained by extracting the cultures were evaporated over a small amount of sodium chlorid solution at a low temperature. The photodynamic action of the extracts thus obtained was tested first on the potassium iodid-starch mixture, and was found to be active in the light and inactive in the dark. When a series of mice were inoculated, those exposed to the light soon developed edema and reddening of the ears, and swelling and edema of the eyelids. In a few experiments, death quickly followed exposure to sunlight. If the inoculations were continued daily, with repeated exposure to bright light, the ears became gangrenous and dropped off, the tail became rough and scaly and there was some loss of hair from the face and head. The greatest difficulty encountered in these experiments was in determining the strength of the solutions used, for we had no way of standardizing them. Dr. Johnson showed that paramecia also were susceptible to the photodynamic action of these extracts. Attempts were made to infect the animals by feeding, but without success.

CONCLUSIONS

Our observations will not permit us to agree that in all cases of pellagra there was an insufficient amount of animal protein in the diet previous to the onset of the disease; but we do believe that the individuals observed probably consumed an excess of carbohydrates, and, for this reason, we favor the idea advanced above. Those conversant with the diet of people living in the Southern states must have been impressed with the excessive amount of carbohydrates consumed, and this appears to hold true for the warmer countries throughout the world. This does not mean that these people do not obtain a sufficient amount of animal protein.

We have given some of the results obtained during the last three years in the attempted development of a hypothesis which we believe will reconcile some of the opposed views about pellagra. It is not our desire to claim, or even to suggest, that we have discovered the cause of pellagra. We realize that such a claim could be made only after it had been demonstrated that the organism could be isolated in the majority of a large number of pellagra cases, and that it does not occur in nonpellagrous individuals. The decrease in the disease renders this task impossible for us, so it was thought best to report the results we have obtained up to date, and let others, if they so desire, carry on the work.

ROENTGENOGRAPHY OF URINARY TRACT DURING EXCRETION OF SODIUM IODID *

EARL D. OSBORNE, M.D.
CHARLES G. SUTHERLAND, M.B. (TOR.)
ALBERT J. SCHOLL, JR., M.D.
AND
LEONARD G. ROWNTREE, M.D.
ROCHESTER, MINN.

There is need of a simple and painless method of depicting the urinary tract, bladder, kidneys and ureters. By the use of catheters and various opaque

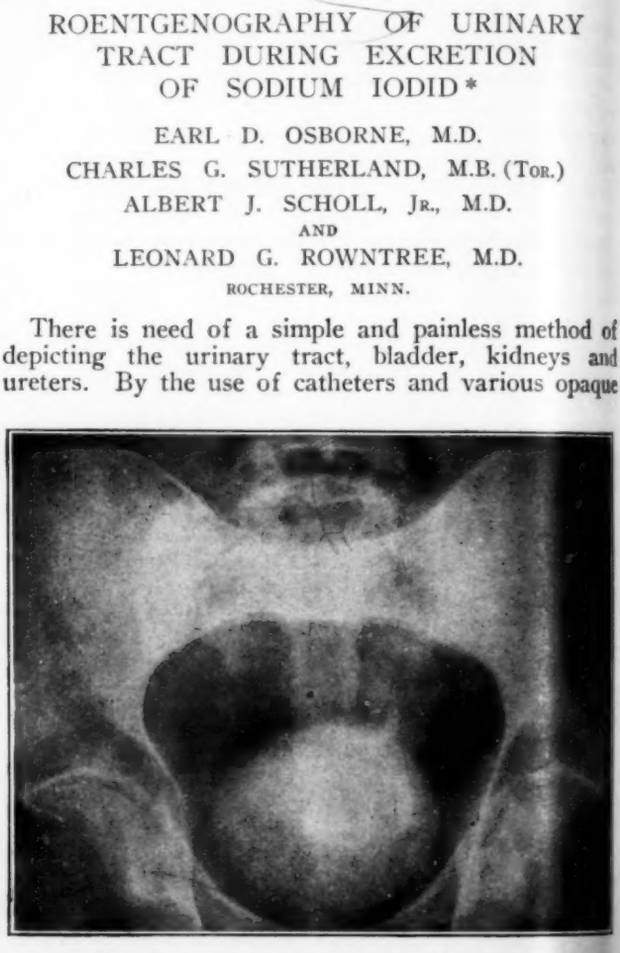


Fig. 1.—The patient received 200 c.c. of a 10 per cent. solution of sodium iodid intravenously. The roentgenogram made two hours later revealed a perfect outline of the full bladder.

mediums, success has been attained so far as the bladder, ureters and pelves of the kidney are concerned. Cystography and urography, while of great importance, are not without drawbacks and limitations. The use of the urethral or ureteral catheter is subject to obvious objections from both the physician's and the patient's standpoint. Technically, ureteral catheterization is at times very difficult, and it often subjects the patient to excruciating pain and occasionally to serious reactions. While pyelography may clearly delineate the renal pelves, it may fail to reveal the outline of the kidney itself. In surgical and medical diseases of the kidney, information concerning the size and location of these organs is of paramount interest. In nephritis, for example, it would be of decided value to be able to ascertain definitely during the patient's life whether his kidney is large, small or contracted, or of normal size. While the kidneys may be clearly outlined by inducing a pneumoperitoneum, and possibly by injecting air locally into the renal

* From the Division of Medicine, Mayo Clinic.

regions, these procedures, for obvious reasons, are not likely to be practiced generally.

It occurred to one of us (L. G. R.) that if, in roentgenography of the urinary tract, advantage could be taken of the fact that sodium iodid, after its introduction into the body, is normally excreted in the urine, roentgenograms of the kidneys, ureters and bladder might be secured without the need of catheterization. An ideal opportunity for the clinical testing of this idea presented itself in the section on dermatology and syphilology of the Mayo Clinic, where one of us (E. D. O.) was utilizing intravenously from 50 to 250 c.c. of a 10 per cent. solution of sodium iodid in the study of the pharmacology and therapeutics of iodids. This circumstance made possible an immediate and direct clinical study, eliminating the necessity of carrying out time-consuming preliminary investigations on animals. The patients were informed of our interest in this problem, and many of them volunteered to undergo the roentgen-ray studies.

THE INTRODUCTION OF VARIOUS MEDIUMS IN THE URINARY TRACT

Voelcker and Lichtenberg,[1] in 1906, were the first to report the use of an opaque roentgenographic medium, injected into the pelvis of the kidney for the purpose of determining the pelvic outline. Colloidal silver, the medium suggested by them, was dirty and expensive, and it often caused severe reactions. In 1915, Burns [2] reported very satisfactory results with thorium nitrate. Various other chemical compounds were suggested, but none were satisfactory. The proprietary preparations were expensive and often caused marked reactions. The work of Braasch and Mann [3] has demonstrated that practically all the silver compounds, when retained in the pelvis of the kidney or injected under pressure, produce areas of cortical necrosis. In some instances, it has been possible to find definite deposits of the metal in the renal cortex. Praetorius,[4] who suggested the use, as a medium, of a preparation claimed to contain colloidal silver iodid, cites twelve deaths, previous to 1917, from the use of colloidal silver. Later, Schüssler [5] and Barreau [6] reported severe reactions from the use of the preparation claimed to contain colloidal silver iodid.

Fig. 2.—The patient received 135 c.c. of a 10 per cent. solution of sodium iodid intravenously. The roentgenogram made one and one-half hours later contained shadows of the pelvis, the major calices and a portion of the ureter on both sides.

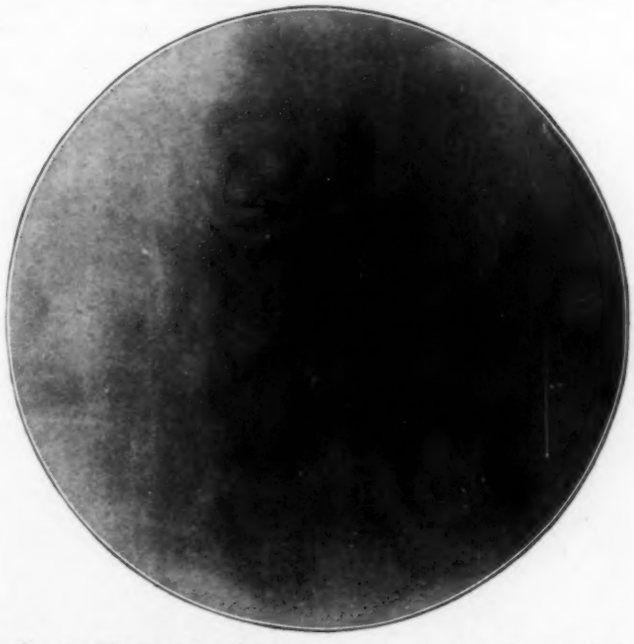


Fig. 3.—The patient received 100 c.c. of a 10 per cent. solution of sodium iodid intravenously. The roentgenogram made one hour later contained a definite outline of the pelvis of the left kidney, with the ureter from 4 to 6 cm. distant from the kidney hilus.

Kelly and Lewis,[7] in 1913, were the first to suggest the use of an iodid as a medium. They recommended silver iodid emulsion. Sodium iodid as a medium in roentgenography was introduced by Cameron [8] in 1918. The striking lack of toxicity of sodium iodid has long been known, but not fully appreciated. Enormous doses have been used clinically by syphilologists in the treatment of syphilis. Experimentally, the lack of toxicity of the iodids was illustrated recently by Weld,[9] who found that toxic effects did not follow the administration intravenously of 50 c.c. of a 25 per cent. solution to dogs weighing 6 kg. Weld suggested the use of sodium bromid, which is now generally used for depicting the renal pelves and ureters in urologic examinations at the Mayo Clinic. Sodium bromid causes fewer reactions than sodium iodid, but does not give such clear roentgenographic outlines. Sodium

1. Voelcker, F., and Lichtenberg, A.: Pyelographie (Roentgenographie des Nierenbeckens nach Kollargolfüllung), München. med. Wchnschr. **53**: 105-107, 1906.
2. Burns, J. E.: Thorium, a New Agent for Pyelography, Preliminary Report, J. A. M. A. **64**: 2126-2127 (June 26) 1915.
3. Braasch, W. F., and Mann, F. C.: Effects of Retention in the Kidney of Media Employed in Pyelography, Am. J. M. Sc. **152**: 336-347 (Sept.) 1916.
4. Praetorius, G.: Pyelographie mit kolloidalem Jodsilber ("Pyelon"), Ztschr. f. Urol. **13**: 159-168 (April) 1919.
5. Schüssler, H.: Zur Pyelographie mit "Pyelon," München. med. Wchnschr. **67**: 750-751 (June 28) 1920.
6. Barreau, E.: Zur Frage der Pyelographie, Ztschr. f. Urol. **15**: 134-144, 1921; Ueber Pyelon, ibid. **15**: 507, 1921.
7. Kelly, H. A., and Lewis, R. M.: Silver Iodide Emulsion—a New Medium for Skiagraphy of the Urinary Tract, Surg., Gynec. & Obst. **16**: 707-708, 1913.
8. Cameron, D. F.: Aqueous Solutions of Potassium and Sodium Iodids as Opaque Mediums in Roentgenography, Preliminary Report, J. A. M. A. **70**: 754-755 (March 16) 1918; A Comparative Study of Sodium Iodid as an Opaque Medium in Pyelography, Arch. Surg. **1**: 184-214 (July) 1920.
9. Weld, E. H.: The Use of Sodium Bromid in Roentgenography, J. A. M. A. **71**: 1111-1112 (Oct. 5) 1918; Toxicity of Pyelographic Mediums, Report of a Death Following the Use of Thorium Nitrate, J. Urol. **3**: 415-426 (Oct.) 1919. Renal Absorption with Particular Reference to Pyelographic Mediums, Med. Clin. N. America **3**: 713-731 (Nov.) 1919.

bromid, like sodium iodid, is of such low viscosity that it often runs from the pelvis and ureter before the roentgenogram is completed.

METHOD OF ADMINISTRATION OF SODIUM IODID

Intravenous Administration.—The method of intravenous administration of sodium iodid has been employed in the section on dermatology and syphilology since 1918. The patient is first given 15 grains (about 1 gm.) of potassium iodid by mouth, three times a day for two days, in order to determine whether there is an idiosyncrasy to the drug. If no symptoms of acute iodism occur, the intravenous injection of a 10 per cent. solution is begun, the third day.

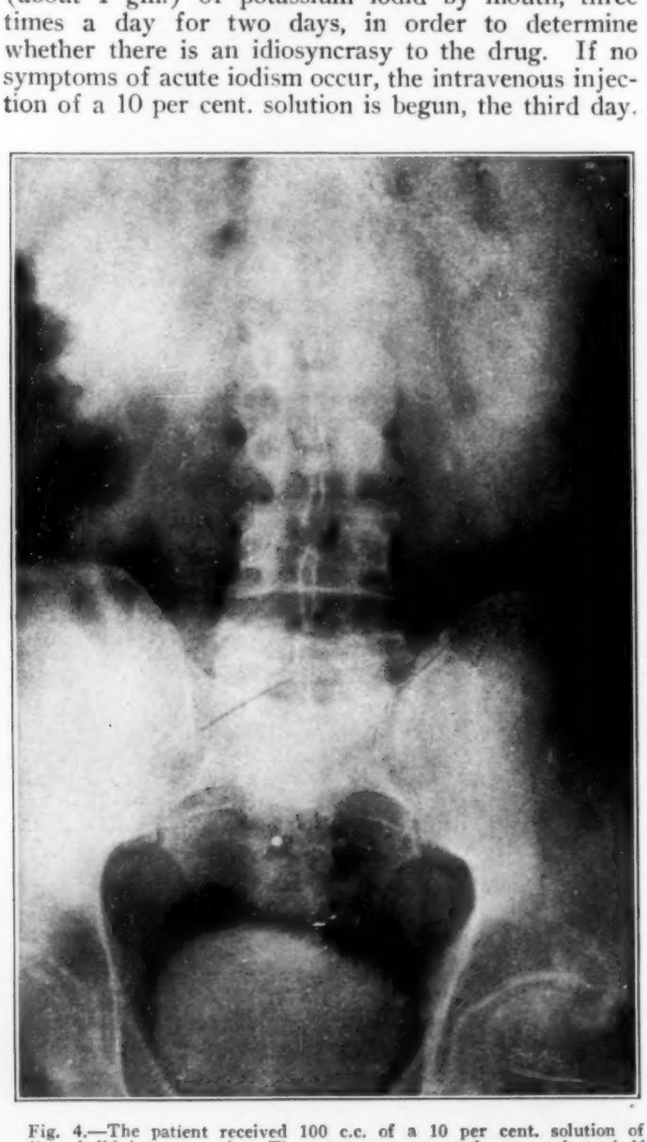


Fig. 4.—The patient received 100 c.c. of a 10 per cent. solution of sodium iodid intravenously. The roentgenogram made one and one-half hours later revealed a perfect outline of a full bladder, and an outline of the pelvis of the left kidney with a suggestion of the calices and the ureter for a distance of from 3 to 4 cm. below the hilum of the kidney. The right kidney area was obscured by gas in the colon.

Various dosages have been employed, ranging from 5 to 20 gm. of a 10 per cent. solution of chemically pure sodium iodid. As Osborne has pointed out, 10 gm. may be given to practically every patient without untoward symptoms, provided the injection is not too rapid, that is, not completed in less than four or five minutes. With a dose of more than 10 gm., symptoms appear, probably due to osmotic changes resulting from large amounts of the hypertonic salt solution. It would seem that 10 gm. is a fair dose for the average routine case. Naturally, the usual contraindications to iodids apply here; that is, patients with tuberculosis, adenomatous thyroids, exophthalmic goiter and marked debility are not good subjects for this form of treatment. Generally speaking, our results following the intravenous administration of sodium iodids may be summarized thus:

1. Satisfactory roentgenograms of the bladder were secured in practically every case with doses of from 5 to 20 gm. intravenously.

TABLE 1.—IODIN IN THE URINE AFTER SODIUM IODID INTRAVENOUSLY

	Sodium Iodid, 5 Gm.			Sodium Iodid, 10 Gm.			Sodium Iodid, 20 Gm.		
		Iodin Excreted			Iodin Excreted			Iodin Excreted	
Time After	Urine, C.c.	Per Cent.	Mg. per 100 C.c.	Urine, C.c.	Per Cent.	Mg. per 100 C.c.	Urine, C.c.	Per Cent.	Mg. per 100 C.c.
15 min.	9.5	1.2	5.6	43.0	1.2	2.5	55.0	0.5	1.6
30 min.	17.5	3.5	8.5	21.5	1.9	7.8	40.0	0.6	2.8
45 min.	16.5	2.9	7.4	21.5	2.5	10.0	26.0	0.5	3.8
1 hr.	14.0	2.0	6.3	22.5	2.7	10.2	25.5	1.0	7.0
2 hrs.	77.5	8.8	4.9	95.0	8.7	7.7	146.0	8.4	9.8
3 hrs.	54.0	5.4	4.4	106.0	5.2	4.2	104.0	7.7	12.7
4 hrs.	43.0	6.4	6.2	93.0	2.5	2.2	133.0	10.4	13.3
6 hrs.	....	...	...	25.0*	1.9	5.9			
7 hrs.	218.0	16.5	3.2	....	...	...	225.0	15.6	11.8
8 hrs.	....	...	...	102.0	8.7	7.2			
18 hrs.	490.0	19.5	1.6	473.0	17.6	3.2	375.0	23.4	10.5
24 hrs.	245.0	10.0	1.7	590.0	6.6	0.9	151.0	8.1	7.5
48 hrs.	1055.0	14.7	0.59	965.0	15.5	1.4	1080.0	13.9	1.2
72 hrs.	960.0	2.8	0.12	1005.0	4.6	0.3	1030.0	3.7	0.6
96 hrs.	995.0	0.5	0.02	1120.0	0.3	0.02	975.0	0.1	0.01
120 hrs.	1010.0	Trace	....	945.0	Trace	....	950.0	Trace	
In 24 hrs.		76.2	....	.....	59.5	....	.....	76.2	
In 48 hrs.		90.9	....	.....	75.0	....	.....	90.1	
In 72 hrs.		93.7	....	.....	79.6	....	.....	93.5	
In 96 hrs.		94.2	....	.....	79.9	....	.....	93.9	

* Approximately four fifths of this specimen was lost.

2. Ten gram doses of sodium iodid intravenously gave fair roentgenograms of the kidneys and ureters in approximately 50 per cent. of the cases, and occasionally of the liver and spleen.

3. The best roentgenograms of the upper urinary tract and of the spleen and liver were secured with the use of large doses, that is, from 15 to 20 gm.

The time elapsing between the administration of the sodium iodid and the taking of the roentgenogram is of vital importance. Table 1 shows the amount and concentration of iodin in the urine at varying intervals following the intravenous administration of 5, 10, and 20 gm. doses of a 10 per cent. solution of sodium iodid. The highest point of concentration following a dose of 5 gm. is in the second fifteen minute interval, when 8.5 mg. of iodin was excreted in each cubic centimeter of urine. With a dose of 10 gm., this amount rose to 10.2 mg. of iodin for each cubic centimeter of urine during the third fifteen minute interval, and following the 20 gm. dose, to 12.7 mg. during the second hour and 13.3 mg. during the third hour. From

TABLE 2.—URINARY EXCRETION OF IODIN AFTER SODIUM IODID BY MOUTH

	Sodium Iodid, 1 Gm.			Sodium Iodid, 5 Gm.			Sodium Iodid, 20 Gm.		
		Iodin Excreted			Iodin Excreted			Iodin Excreted	
Time After Before	Urine, C.c. Sample	Per Cent. Trace	Mg. per 100 C.c.	Urine, C.c. Sample	Per Cent. Trace	Mg. per 100 C.c.	Urine, C.c. Sample	Per Cent. Trace	Mg. per 100 C.c.
1 hr.	59.0	5.3	0.76	77	7.3	4.03	296	10.9	8.34
2 hrs.	46.0	8.6	1.58	52	7.1	5.10	122	6.2	8.42
3 hrs.	52.0	7.1	1.29	119	9.9	3.51	63.5	1.6	4.24
4 hrs.	45.5	6.3	1.32	212	6.8	1.35			
6 hrs.				365	18.5	2.14	252	4.4	2.97
10 hrs.	300	24.0	0.75	226	11.0	2.06	886	30.9	5.9
24 hrs.	470	26.7	0.53	433	23.7	2.32	734	23.6	5.4
48 hrs.	910	12.6	0.13	843	12.1	0.61	1120	14.2	2.1
72 hrs.	...	....	....	895	2.4	0.10	955	5.7	0.8
96 hrs.	...	....	....	990	0.4	0.01	885	0.2	0.04
120 hrs.	...	....	....	1120	Trace	Trace	1060	Trace	Trace

these data, it is seen that the roentgenograms should be taken one-half hour, one hour and two or three hours after doses of 5, 10, and 20 gm., respectively. Our best results have been obtained by following this procedure, based on an actual determination of the rate of excretion of sodium iodid.[10]

Administration by Mouth.—It was at first thought that roentgenograms of the urinary tract, following administration of sodium iodid by mouth, would be of no value because of the shadows cast by the drug in the stomach and in the small intestine. The contrary has been shown, however, when the proper technic is employed and attention is paid to the time interval between the administration of the iodid and the making of the roentgenogram. Satisfactory roentgenograms have been obtained at one and two hour intervals following a single large dose of 10 gm. of sodium iodid. This method, however, is not applicable to routine cases because of the local gastric upset following the ingestion of such large amounts of the salt. Our best results have been obtained by administering 3 gm. of sodium iodid hourly for three hours and taking the roentgenograms from one hour to two hours after the last dose. The rationale of this procedure is shown in Table 2. The urinary concentration of iodin following the oral administration of sodium iodid becomes highest during the one hour to three hours after the ingestion of from 1 to 5 gm. of the salt.

The patient is prepared in the routine manner for roentgen-ray examination of the urinary tract. At 8 a. m. he is instructed to take the first powder, consisting of 3 gm. of the sodium iodid, well diluted in from one to two glasses of water. He is instructed to empty the bladder at this time and not to pass more urine until the examination is completed. At 9 a. m. and at 10 he repeats the procedure, and at 11 the first roentgenogram is made, after which he is instructed to void as much urine as possible. This is measured and a second roentgenogram is made. It may be that the administration of large doses of sodium iodid will yield uniformly better results, but such has not been our experience. The employment of less than 3 gm. for each dose has not yielded satisfactory results except in a few instances.

In case the bladder alone is to be studied, the administration of a single dose of from 3 to 5 gm. of sodium iodid, without previous preparation, is all that is necessary. In this case the patient should be instructed not to void and the roentgenogram should be taken three hours after the ingestion of the drug. Results following the oral administration of sodium iodid may be summarized thus:

1. Very satisfactory roentgenograms were secured of the kidneys, pelves of the kidney, ureters and bladder in approximately 50 per cent. of cases, with repeated doses.
2. In a few cases the liver and spleen were also strikingly outlined.
3. Uniformly excellent results were obtained in the roentgenography of the bladder, following the repeated doses and after a single dose.

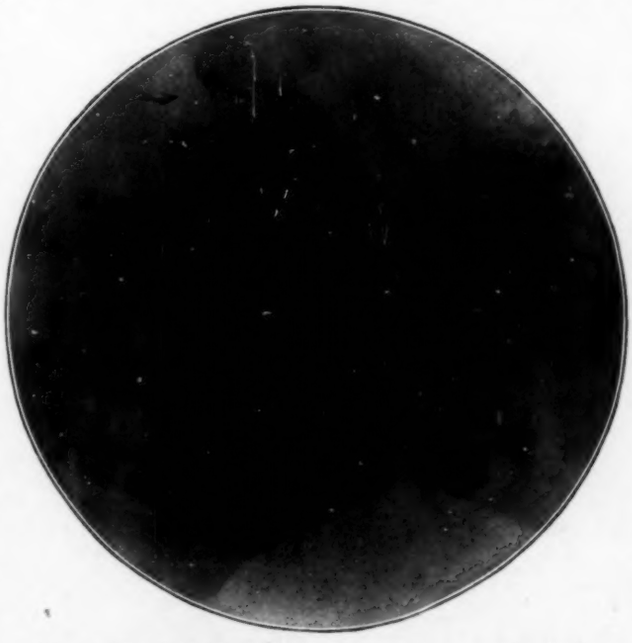


Fig. 5.—The patient received 100 c.c. of a 10 per cent. solution of sodium iodid intravenously. The roentgenogram made one hour later contained a definite shadow of the pelvis of the left kidney and the ureter for a distance of from 4 to 6 cm. below the hilum of the kidney. There was also a definite suggestion of the major calices.

ROENTGENOLOGIC TECHNIC

In the first studies the technic routinely employed in the examination of the kidneys, ureters and bladder was used. Preliminary control roentgenograms were made before the administration of the sodium iodid. Plates 5 by 7 inches were used, without intensifying screens, one roentgenogram being made of each kidney area and one of the bladder area. A medium focus standard Coolidge tube was used, with 60 kilovolts, 50 milliamperes, an average distance of 67.5 cm. from the target to the plate, and the time was varied from two to eight seconds according to the thickness of the patient. An aluminum compression cap, 12.5 cm. in diameter, fitted over the bottom of the cone, was clamped down as far as could be comfortably borne by the patient. Fairly satisfactory roentgenograms of thin, normal and even moderately stout subjects were obtained by this technic. The plates were marked with the patient's registration number and with the number of hours intervening since the administration of the sodium iodid. In some cases a series of roentgenograms was made at varying intervals after the administration. Another series of studies was made using duplitized films in intensifying screens, varying the kilovoltage and milliamperage according to the thickness of the subject, with uniformly better results, particularly in stout subjects. Control films were also made. Still another series was made using 14 by 17 inch duplitized films in intensifying screens with the Potter-Bucky diaphragm. A single film was made in a few cases; in the majority, two films were made, one high, to include the complete kidney area, and the other to include the bladder area. In this series, many films were made after the subjects had held the urine the allotted time; after they had emptied the bladder and the amount voided had been measured, a second film was made and marked with the amount voided. When actual retention occurred, it was depicted in the roentgenogram. The best uniform results were obtained with the Potter-Bucky diaphragm technic.

10. These data and those dealing with the oral administration have been taken from work already published and work now in the process of publication by Osborne on the general subject of the pharmacology and therapeutics of iodids (Osborne, E. D.: Iodin in the Cerebrospinal Fluid, with Reference to Iodid Therapy, J. A. M. A. **76**: 1384-1386 (May 21) 1921; Contributions to the Pharmacology and Therapeutics of Iodids, ibid. **79**: 615-617 (Aug. 19) 1922; Contributions to the Pharmacology and Therapeutics of Iodids, II, to be published).

INTERPRETATION OF THE RESULTS

In some of the films and plates, because of gas in the colon or because of the thickness of the patient, it was not possible positively to identify the kidney and other solid organs. On the majority of the films

Fig. 6.—The patient received 100 c.c. of a 10 per cent. solution of sodium iodid intravenously. The roentgenogram made one hour later revealed a definite shadow of the partially filled bladder. The density of the kidneys, the spleen and the lower margin of the liver appeared to be increased over the normal. The pelves of both kidneys and the ureters for a distance of from 4 to 6 cm. from the hilum of the kidney were definitely outlined. On the right, there was a suggestion of the lower major calices.

and plates, the shadows of the kidneys, the lower margin of the liver and the spleen were sharply outlined, and it was our impression that, comparing the control plates and films with those made after the administration of the sodium iodid, there was a slight increase in the density of the shadow cast by these organs in the second plates and films of the series.

The pelvis of the kidney filled with iodid solution to varying degrees and the ureters could be traced in a number of instances, while in a few there was even a suggestion of the calices. In all of the plates and films the bladder was distinctly outlined and, as we have mentioned, retained iodid solution could be seen in patients with urinary retention. Obviously, only some of the better plates are shown in the accompanying illustrations.

COMMENT

The method described offers numerous possibilities in the field of research, not only with regard to the urinary tract, but also with regard to other systems, organs and tissues. We are firmly convinced that this investigation will serve as a stepping stone in other fields of study. The method affords an approach to the study of the physiology of the bladder, its form and position under varying degrees of distention, and the phenomena associated with distention and with emptying. It should also prove of decided value in the study of pathologic conditions of the bladder, such as diverticula, tumor and diseases secondary to disturbances in its innervation, or to obstruction in the lower urinary tract, such as stricture and enlarged prostate. In the study of the kidneys, the success of the method is only partial. It will be of assistance in a limited way, especially in determining the size, shape and position of these organs. It is too early and our results are too uncertain to determine whether the method has any value in the study of the liver and spleen.

Much is offered by this method in the study of the vascular system. Under the fluoroscope, the cephalic vein has the appearance of a steel wire, from the point of injection of the iodid at the elbow to the juncture of the cephalic vein with the subclavian. This has been noted following the use of 10 and 20 per cent. solutions of sodium iodid. In all probability, with variations in the technic, important results will be obtained with regard to the venous returns and the peripheral arterial circulation. In the study of aneurysm and of arteriovenous anastomosis, it should also be of value.

CONCLUSIONS

1. By the method described, it is possible to obtain roentgenograms of the urinary tract during the excretion of sodium iodid following its intravenous or oral administration.

Fig. 7.—The patient received three 3 gm. doses of sodium iodid by mouth. Roentgenograms were made two hours after the last dose, and a shadow of the full bladder was obtained. The patient voided 125 c.c. of urine, and a roentgenogram was made which revealed retention that had not been suspected clinically. Further clinical study revealed the existence of a cord bladder.

2. The method uniformly gives excellent and accurate shadows of the urinary bladder and renders reliable information relative to its size, shape and location.

3. It has been partially successful in depicting the renal pelves and the ureters in a limited number of cases.

4. In a number of cases it assists in revealing the kidney itself through intensifying the renal shadow.

5. It has been proved a success in revealing the existence of residual urine in the bladder and in furnishing approximate information of the amount, thus eliminating the necessity of catheterization and its attendant dangers of infection.

6. Oral administration of the drug will prove satisfactory for routine use in making roentgenograms of the bladder, while for shadows of the ureters and kidneys intravenous injection of large doses of sodium iodid is desirable.

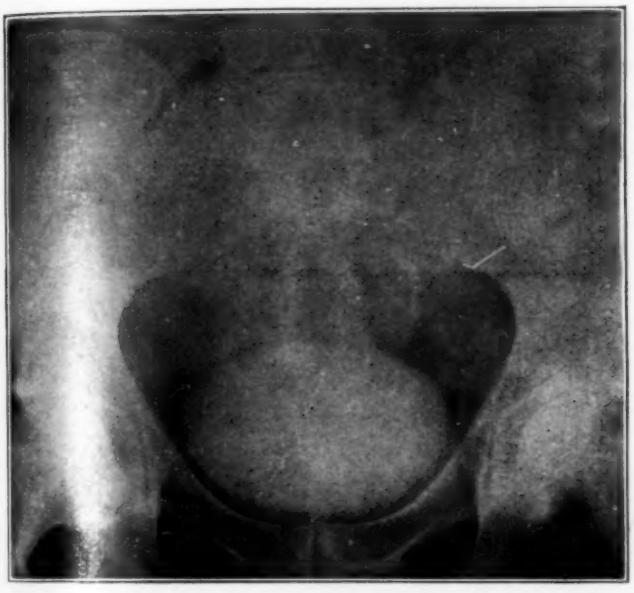


Fig. 8.—The patient received one dose of 5 gm. of sodium diodid by mouth, and a roentgenogram was made three hours after the ingestion of the drug. A perfect outline of the full bladder was revealed.

ACUTE BARBITAL (VERONAL) POISONING

REPORT OF CASE WITH FATAL OUTCOME

WILLIAM COLE, M.D.

ANAHEIM, CALIF.

Acute poisoning from barbital is apparently becoming more common in this country. This is probably due to the fact that the drug is so easily obtained without a physician's prescription. It is also due to the increase in the number of persons who seek hypnotic drugs in order to procure sleep; for it seems that the symptom of insomnia is becoming more common among all classes of our population.

That serious symptoms may arise from overdosage or prolonged use of barbital does not seem to be generally recognized even by the profession, but that this is so is attested by the cases reported in recent medical literature by Littell,[1] Hassin and Wein,[2] Taub[3] and Macleod.[4] Boenheim[5] states that, in a series of 286 cases of acute poisoning observed in Sick's service at Stuttgart in thirteen years, barbital was the drug taken in 5.7 per cent. of the cases, and five of the patients died. All of these had taken barbital in excess of 10 gm.

Acute barbital poisoning, in the absence of a history, may be easily mistaken for a number of other diseases giving rise to comatose states. This is especially true of epidemic (lethargic) encephalitis and certain cases of meningovascular syphilis. The case here reported illustrates most of the salient features in the symptomatology.

REPORT OF CASE

History.—R. H. M., a man, aged 39, married, white, an American, was admitted to the Anaheim Hospital, Oct. 16, 1921, in a state of profound coma. Friends who accompanied the patient stated that he had been found in a shack in the oil fields in this condition, and it was thought that possibly he had been overcome by carbon monoxid gas from a leaky gas stove used to heat the shack. Search of the patient's effects revealed a box containing twenty 5-grain (0.3 gm.) tablets of barbital, and a note to his wife expressing his intention of committing suicide. The patient's wife said he had always been in good health except for an attack of influenza in February, 1921, following which he had been subject to many "colds" and occasional attacks of mental depression. During the summer of 1921, his work had been very arduous, and he had undergone a good deal of mental strain.

Four weeks prior to admission, he consulted a physician on account of insomnia, and the latter prescribed barbital, 5 grains, to be taken at bedtime. He took one tablet each night for a week. At the end of the week, he had the prescription refilled, and he took two tablets each night for another week. Two weeks before admission, he went on a vacation, but he could not enjoy it because of insomnia, so he returned home after three days. October 11, he consulted another physician, who prescribed barbital. He also bought a box of barbital himself in Pasadena. His wife stated that he was at home every day for the six days preceding admission, and he appeared to be in normal health except that he looked worn out and was quite depressed because of insomnia. She said that he had taken six or seven of the tablets each day for the five days preceding his admission to the hospital. October 16, he resumed his work. That afternoon he was found unconscious and was brought to the hospital.

Physical Examination.—The patient was well developed. He was in profound coma. The temperature was 101 F. The face was cyanosed and the breathing stertorous, with the mouth open and the maxilla drawn down almost on the chest. The tendon reflexes were very lively. Muscular rigidity was marked. The pupils were round and equal, and reacted to light and to painful stimuli, such as pinching the neck. Hippus was present. No nystagmus was noted. The fundus oculi was normal. The Babinski sign and variants were negative on both sides, as was knee and ankle clonus. The cremasteric reflexes were present. The epigastric and abdominal reflexes were not obtained. At intervals, the patient moaned and moved the limbs. Shouting in his ears elicited no response. Painful stimuli of any degree failed to rouse him. Strong ammonia applied to the nostrils produced no defense movements or wrinkling of the face.

The radial pulse rate was 100. Both radial pulses were full, equal and regular. The blood pressure was: systolic, 145; diastolic, 95. The heart showed no abnormalities. At intervals, there was profuse perspiration. Respirations were 30 a minute, changing at times to the Cheyne-Stokes type. There was marked dyspnea and diaphragmatic breathing. Tracheal râles were heard over the lungs. The mouth was open, the tongue swollen and congested. The patient was able to swallow fluids. Mucus tended to collect in the throat, and increased the degree of dyspnea and cyanosis already present. The abdomen was negative. The urine and feces were passed involuntarily.

Laboratory Data.—Examination of the blood revealed: erythrocytes, 4,450,000; hemoglobin (Dare), 93; smear, nor-

1. Littell, J. J.: Veronal (Barbital) Poisoning, J. A. M. A. **77**: 1333 (Oct. 22) 1921.
2. Hassin, G. B., and Wien, M. S.: Case of Acute Veronal (Barbital) Poisoning Simulating Epidemic ("Lethargic") Encephalitis, J. A. M. A. **75**: 671 (Sept. 4) 1920.
3. Taub, S. J.: Acute Veronal Poisoning, J. A. M. A. **74**: 459 (Feb. 14) 1920.
4. Macleod, Ernest: Med. Rec. **98**: 985 (Dec. 11) 1920.
5. Boenheim, F.: Acute Barbital Poisoning, Med. Klin. **17**: 1263 (Oct. 16) 1921; abstr., J. A. M. A. **78**: 76 (Jan. 7) 1922.

mal; leukocytes, 7,600; carbon monoxid hemoglobin, absent; differential leukocyte count: polymorphonuclears, 68 per cent.; small mononuclears, 25; large mononuclears, 2; eosinophils, 1; transitionals, 4; blood Wassermann test, negative; blood culture, negative; chemical analysis of blood: creatinin, 2.75 mg.; uric acid, 3.1 mg.; urea nitrogen, 19 mg.; nonprotein nitrogen, 39 mg.; chlorids, 0.7 mg.; blood sugar, 0.12 per cent.

Cerebrospinal fluid examination revealed: Wassermann, Nonne, Noguchi and Ross-Jones tests, negative; cell count, 8; colloidal gold curve, negative. The urine and cerebrospinal fluid contained no hematoporphyrin. Urinalyses, October 16, 17, 18 and 19, were all completely negative.

Clinical Notes.—October 17, the patient's general condition was much the same. Increasing difficulty in respiration was relieved by oxygen inhalations. The patient moved his head more than on the day of admission. A lumbar puncture did not cause any movement of the patient, nor did it rouse him in the least degree from coma. Feces and urine were passed involuntarily. The temperature range in twenty-four hours was from 99 to 103.8 F.

October 18, the temperature rose to 104.5 F. at 8 p. m., and remained high all day. The muscles were now flaccid. The limbs took the position determined by gravity. The tendon reflexes were now diminished. Cyanosis was marked at times, and there was much tracheal rattling. Coarse mucous râles were heard throughout both lungs. Dyspnea was increasing. The twenty-four hour temperature range was from 99.5 to 104.5 F.

October 19, the patient was in very poor condition, sweating profusely, with extreme dyspnea and cyanosis. Oxygen inhalation failed to give relief. At noon, breathing was definitely of the Cheyne-Stokes type, and the lungs were full of mucous râles. The patient died at 3:10 p. m.

Treatment.—Frequent inhalations of aromatic spirits of ammonia were ordered; strychnin sulphate one-thirtieth grain, hypodermically, every four hours and camphor in oil hypodermically, as required. Hot coffee enemas, 6 ounces (178 c.c.) every six hours, were prescribed. Sodium bicarbonate solution, 3 per cent., by proctoclysis, was given every other hour. Fluids were given by mouth. The colon was washed out with high soda enemas, morning and evening. Oxygen inhalation was prescribed as required, for dyspnea and cyanosis, and caffein sodiobenzoate, 7 grains (0.46 gm.) hypodermically, also as required. Tepid sponge baths were given frequently to reduce temperature, and on account of the sweating.

COMMENT

It was estimated that the patient had taken more than 300 grains (20 gm.) of barbital in a period of less than four weeks, 175 grains (11.6 gm.) of which was taken four or five days preceding admission. On admission, the usual conditions giving rise to coma had to be considered; namely, cerebral hemorrhage, alcohol and drug poisoning, epidemic encephalitis, carbon monoxid poisoning, brain tumors, diabetic coma, cerebral syphilis, uremia and unrecognized brain injury.

Blood and serologic tests ruled out syphilis and carbon monoxid poisoning.

Urinalysis and blood sugar examination excluded diabetes. The previous history of good health and freedom from bad habits practically excluded brain tumor, alcoholism and kidney disease.

History and physical examination eliminated trauma.

Carbon monoxid poisoning seemed a plausible explanation for the symptoms at the time of admission, but a more detailed history and the negative blood examination vetoed this opinion.

Epidemic encephalitis was simulated very closely, but the definite history of ingestion of large amounts of barbital, together with the extreme degree of coma, which is not the rule in epidemic encephalitis, led to a definite diagnosis of barbital poisoning.

This case, so far as I can ascertain, is the only one reported in recent American medical literature which had a fatal outcome.

AN OPERATION FOR INGROWING TOE NAILS *

GROVER C. NEY, M.D.
BALTIMORE

Ingrowing toe nail is a very common disorder. It is caused either by tight fitting shoes or by the bad practice of cutting the angles of the nails, allowing the sharp corners to jut into the soft parts, producing an eroded area that soon becomes infected. This condition usually occurs on the mesial side of the great toe, and less commonly the side near the second toe. Frequently the nail is markedly convex, and the edge curved toward the toe, cutting into the flesh and producing an erosion. The toe becomes not only painfully inflamed, but also thickened, as a result of the nail's acting as an irritant.

Fig. 1.—*a*, superolateral pedicle graft.

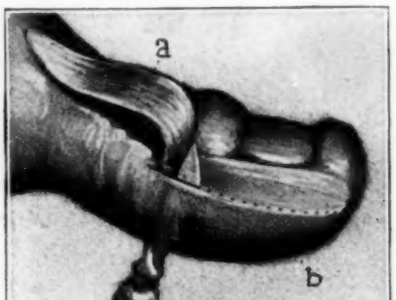


Fig. 2.—*a*, superolateral pedicle graft thrown back; b, inferolateral pedicle graft.

Fig 3.—*a*, *b*, two pedicle grafts laid back for protection; *c*, knife inserted obliquely to excise tissue; inset, direction in which knife should be inserted.

The palliative treatment is effective, provided the soft parts have not become eroded or infected. Even after recovery from the palliative procedures, the condition is prone to recur. Most of the operations for ingrowing toe nails have to do with the removal of a portion of the nail. The operation commonly performed consists of excising a V-shaped portion with the apex at the root of the matrix of the nail. This wedge contains the inflamed, tender tissue, and a portion of the nail with its underlying matrix.

This operation has several objections. It denudes an area which, owing to its location anatomically

* From the Surgical Clinic of the Hebrew Hospital.

and physically, is slow to heal. Some cases take from two to three months to epidermatize completely. If the operator is not thoroughly experienced with the procedure, the matrix is not completely removed, the nail grows, and the patient has a recurrence of the ingrowing toe nail. After the wound is completely healed, a portion of the nail remains which has an irregular contour, and is bothersome.

The operation here described is done solely on the soft parts, and the nail is not disturbed. In seventy-five cases there has been no recurrence. A tourniquet is placed around the base of the toe for two purposes: to make the field bloodless, and to act as a partial nerve block. The side of the toe is well anesthetized with 0.5 per cent. procain; the injection is begun half way between the base of the toe and the matrix of the nail, and is extended well round to the middle of the toe, both anteromesially and posteromesially. A small, sharp knife blade is then slipped under the skin, as shown in Figure 1, and a fairly thin pedicle graft is cut from the superolateral side of the toe. Another similar pedicle graft is cut immediately below it from the inferolateral side of the toe, as shown in Figure 2. The two pedicle grafts are thrown back and carefully protected so as not to be injured by the next procedure. The knife is then inserted in an oblique direction in the cutaneonail fold, as shown in Figure 3.

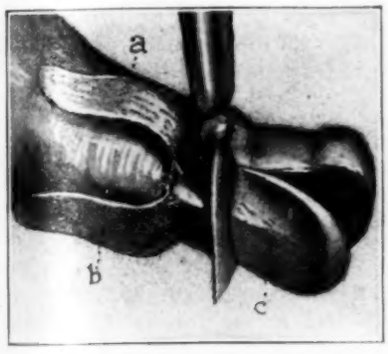


Fig. 4.—*c*, knife cutting tissue from side of toe.

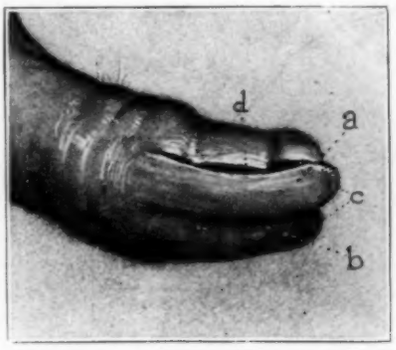


Fig. 5.—*a*, *b*, superolateral and inferolateral pedicle grafts laid over denuded area; *c*, tissue trimmed from grafts to suit the size of the denuded area; *d*, nail elevated with cotton, and graft placed under the nail.

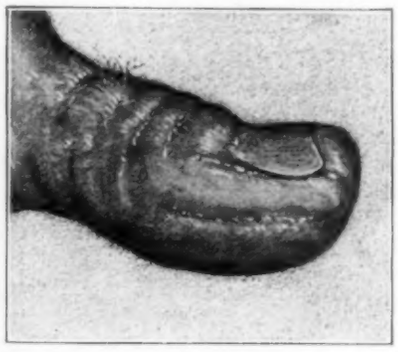


Fig. 6.—Healed toe.

The knife should be inserted immediately in the angle and close to the bone. The incision should be continued to the tip of the toe, and the tissue should be snipped off as high up as possible. The two pedicle flaps are then placed over the denuded area and trimmed to suit the size and shape of the raw surfaces, as shown in Figure 4.

The anterior flap is placed just beneath the nail, and the nail is elevated with a piece of cotton. The toe is covered with a piece of rubber protective coated with petrolatum, and a large gauze dressing applied.

The wound should not be dressed until the sixth day after operation. Frequently the pedicle attachment of the graft has sloughed, but it has already accomplished its purpose. The implanted skin remains, and covers the raw area in a surprisingly short time.

If, previous to operation, the toe has not been infected, healing should take place in from two to three weeks, but in infected cases the period of healing may extend to seven weeks. Naturally, the delicate grafts take better if the patient does not walk.

The operation is painless, and the patients do not suffer postoperatively. After the first week, if the patients are disinclined to remain in bed, they are permitted to walk, using a cut-out shoe. In the elderly and debilitated, the time of recovery may be proportionately prolonged. Figure 6 shows a healed, uncomplicated case, seventeen days after operation.

2401 Linden Avenue.

FIBROLIPOMA OF LEFT LABIUM MAJUS

WILLIAM R. LOVELACE, M.D.
Surgeon, St. Joseph's Hospital
ALBUQUERQUE, N. M.

Lipoma of the vulva is of sufficiently rare occurrence to make the report of a case worth while.

REPORT OF CASE

A widow, aged 40, who had given birth to two children, both normal deliveries, was a native of New Mexico. There was nothing in the family or personal history which had any bearing on the condition under discussion. Except for the usual diseases of childhood, she had always enjoyed perfect health, up to the time the growth appeared.

Examination.—The patient was well nourished, 5 feet, 6 inches tall, and weighed 200 pounds. The blood pressure was systolic, 130; diastolic, 85. The abdomen was flat and without rigidity. No tumor masses could be felt anywhere. All the organs were normal and appeared to be functioning properly. The appetite was good, and the patient suffered no pain before or after eating. She said that she slept well. The knee jerks were slightly increased; all other reflexes were normal.

Suspended from the left labium majus was a pedunculated tumor, covered by elastic, hypertrophied skin, which at many points showed pitting on the surface. Two or three small areas of epidermis presented a thin glistening appearance, which was evidently due to friction. This mass had attained such an enormous size that it hung down to the patient's knees like an apron, as shown in the accompanying illustration. The patient said that she had first noticed the growth in February, 1919, three years and a half before the photograph was made.

On palpation, the tumor seemed to consist of rather firm tissue, with the characteristic fluctuations of a fatty growth. Pressure did not produce pain, the only sensation mentioned by the patient being a "slight smarting," which had, at times, been noticed.

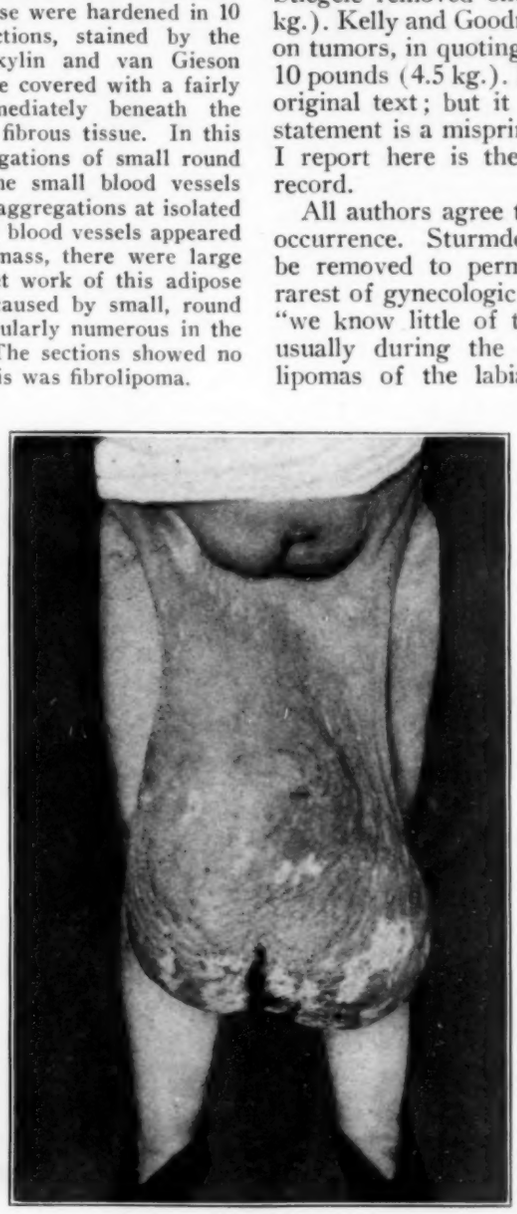
Treatment.—The diagnosis was fibrolipoma. Excision was advised, and the tumor was removed.

Pathologic Report.—The tumor weighed 44 pounds (20 kg.). The pathologist, Dr. James R. Scott of Albuquerque, reported that, on section, he found that the epidermis was underlaid by a layer of dense, glistening, white fibrous tissue, about 1 inch (2.5 cm.) in thickness. Deeper in the specimen were large collections of lobulated adipose tissue, surrounded by a framework, together with a number of large veins which

bled freely on incision. There was no evidence of enlarged lymphatics. Plugs were taken from the thickened skin and underlying fibrous tissue, also from a characteristic island of fat surrounded by fibrous tissue. These were hardened in 10 per cent. liquor formaldehydi. Sections, stained by the hematoxylin and eosin and hematoxylin and van Gieson methods, showed the tumor mass to be covered with a fairly normal appearing epithelium. Immediately beneath the epithelium was a thick layer of firm fibrous tissue. In this fibrous tissue were many local aggregations of small round inflammatory cells, grouped about the small blood vessels especially, but also occurring as local aggregations at isolated points in the fibrous tissue. The small blood vessels appeared normal. Still deeper in the tumor mass, there were large deposits of adipose tissue. In the net work of this adipose tissue was considerable infiltration, caused by small, round inflammatory cells, which were particularly numerous in the vicinity of the small blood vessels. The sections showed no evidence of malignancy. The diagnosis was fibrolipoma.

CASES REPORTED IN THE LITERATURE

According to Lynch's [1] recent study of pelvic neoplasms, lipoma of the vulva is a rare occurrence, and this is all the more surprising because lipomas in general are very common. "The infrequency of these cases is well shown by the fact that no operator has yet recorded more than a single case in his own experience." In 1893, Howard A. Kelly [2] compiled nineteen cases from the literature, to which he added a case of his own. In 1914, A. L. Goodman [3] published an account of a lipoma of the vulva, occurring in a child, aged 11, and mentioned nineteen other reports which he had found recorded. Ten of these are included in Kelly's list, of which Goodman evidently had no knowledge. Lynch mentions six authors who have published reports of cases since the appearance of Kelly's paper; but his references are so incomplete and unreliable that they cast doubt on the accuracy of this statement. Churchill Carmalt,[4] writing in 1902, after mentioning Kelly's list, says that he found seven cases among those patients first treated for hernia, in a report on this subject by Jonathan Hutchinson, Jr.,[5] and that three cases were reported to him verbally by T. G. Thomas and W. S. Stone, making, with his own, fourteen additional cases.



Fibrolipoma of left labium majus.

Assuming the correctness of Lynch's statement, reports of less than forty-five cases of lipoma of the vulva have so far appeared in the literature. The tumor in the case reported by Balls-Headley [6] weighed 21 pounds (9.5 kg.), although Lynch quotes it as 24 pounds (10.9 kg.). Balls-Headley says in his article that Stiegele removed one that weighed 101 pounds (45.9 kg.). Kelly and Goodman, and also Senn in his textbook on tumors, in quoting Stiegele's case give the weight as 10 pounds (4.5 kg.). I have been unable to see Stiegele's original text; but it seems likely that Balls-Headley's statement is a misprint. If this is so, the tumor which I report here is the largest lipoma of the vulva on record.

All authors agree that labial lipomas are a very rare occurrence. Sturmdorf,[7] who reported one that had to be removed to permit delivery, calls it "one of the rarest of gynecologic affections." According to Lynch, "we know little of the etiology, save that they occur usually during the child-bearing age." In general, lipomas of the labia majora present practically the same characteristics as similar growths elsewhere in the body. The lipoma is a firm, elastic, rounded, usually multilobulated growth, sharply circumscribed from the surrounding tissue, but without encapsulation. It consists of normal fat tissue, lipoma molle; but this density may be reduced by secondary changes, or more often increased by admixture with fibrous tissue or by forms of metaplasia. It may exhibit an excess of fibrous tissue, because of atrophy of fat with fibrous replacement, or from admixture with true fibroma (fibrolipoma), as in my case. More frequently, true myxoma is combined with lipoma.[8] Virchow was of the opinion that irritation and trauma played an important part in the etiology of lipoma of the vulva. Carmalt's patient gave a history of falling astride a chair and striking the left labium majus. This injury was followed by a painful swelling, on the subsidence of which there remained a rather hard nodule, which gradually developed into a lipoma. Levings [9] remarks that "the very frequent occurrence of fatty tumors at places which have been subjected to irritation, injury, or chronic inflammation is seemingly well established. The production of lipomas is closely related to the formation of normal adipose tissue, as, with very few exceptions, they both occur in the same tissue layers, and are identical in histologic structure. Thoma says that the tendency in individuals to obesity favors the production of lipomata." This is interesting in connection with my patient, who weighed 60 pounds (27 kg.) more than is normal for a woman of her height.

ETIOLOGY

No doubt, lipomas occasionally arise when there is a general increase in body fat; but it is likely that this

1. Lynch, F. H., and Maxwell, A. F.: Pelvic Neoplasms, New York, D. Appleton & Co., 1922.
2. Kelly, H. A.: Lipoma of the Labium Majus, Johns Hopkins Hosp. Reports **3**: 321, 1892-1894.
3. Goodman, A. L.: Lipoma of the Vulva, Am. Med. **9**: 47 (Jan.) 1914.
4. Carmalt, Churchill: Lipoma of the Vulva, Am. J. Obst. **45**: 688, 1902.
5. Hutchinson, Jonathan, Jr.: Lipomata in Hernial Regions, Tr. Path. Soc. London, **37**: 451, 1886.
6. Balls-Headley, Walter: Case of Lipoma of the Labium and Adjacent Parts, Autralian M. J. **10**: 345, 1888.
7. Sturmdorf, A.: Lipoma of the Labium Majus, Am. J. Obst. **61**: 311, 1910.
8. Ewing, James: Neoplastic Diseases, Philadelphia, W. B. Saunders Company, 1919.
9. Levings, A. H.: Tumors, Chicago, Cleveland Press, 1903.

is only because the pathologic production of fat in the form of tumors occurs coincidentally with a predisposition toward the physiologic formation of fat. We are still ignorant of just why lipoma develops, or why the formation takes place in any given part of the body. Vulvar lipomas are prone to become pedunculated, because of their location, the tissues to which they are attached being stretched out to form a broad thin base. In this connection, a case of lipoma in a man, reported by Christopherson [10] is of interest. His patient was an Arab sheik, aged "approximately" 65. He could with difficulty waddle along with his staff, owing to the weight of a mass of fat in his abdominal parietes. The skin hung down from the umbilicus to the middle of the thigh like a bag, enclosing a mass of fat, and behind, becoming continuous with the abdominal skin again over the pubis. This fatty apron could be flapped up toward the chest, and, buried deep in the folds of fat and behind it, was the penis, retracted and hidden. . . . The fatty deposit in the abdominal parietes became pendulous and apron-like, because there was no support, such as cloth trousers give to the western race. Calico garments, loose as they are, afford no support." According to Christopherson, this type of lipoma is quite common in the Sudan, and the possibility of customs of dress having a bearing on the location of dependent fatty tumors is worth considering.

DIAGNOSIS

The diagnosis of labial lipoma is ordinarily quite simple. Kelly points out, however, that these tumors may readily be taken for cysts when the fat is soft in the interior, because of the diminished amount of fibrous tissue, and the deceptive sensation of fluctuation which they give. They may also be mistaken for elephantiasis when the fibrous tissue in their septums is in excess, giving them a hard, even dense, feel. A large lipoma, with its pedicle extending over, or through, the inguinal canal, may easily simulate an inguinal hernia, demanding a careful examination to establish the differential diagnosis. Goodell [11] first thought the growth presented by his patient was a cystic tumor, because of the marked fluctuation, "but an exploratory plunge of an aspirator-needle resulted in a dry tapping," and he "came to the conclusion that it was an adipose tumor."

Carmalt believes that "confusion of these tumors with the smooth lymphangiectatic tumors, known as elephantiasis, would probably be easy; with the tumor reported by Andrews and quoted by Bland-Sutton as 'adrenal rest,' with sebaceous cysts which Winckel reports in the labia." He is also cognizant of an instance in which confusion arose because of "blind internal rectal fistulas entering the labis"; but he considers the chief difficulties are those encountered in differentiating this growth from epiplocele or omental enlargements.

The progress of these lipomas is usually very slow, and, as they are quite painless and very seldom cause inconvenience until they attain considerable size, it is perhaps not strange that no larger number have been brought to the attention of surgeons. The woman whose case is reported by Emmet [12] had learned to accommodate herself so comfortably to the presence of the labial lipoma, "which she carried in a bag attached to her waist," that, once assured that the growth was not malignant, she refused all intervention, and would not even allow another examination that a sketch of the growth might be made.

TREATMENT

Operation is simple. The tumor shells out easily from its attachment, and the wound ordinarily heals by first intention. Especial aspetic precautions must, however, be exercised, as the site of such a growth is peculiarly liable to infection. In Carmalt's case, even the scar was invisible beneath the pubic hair, the labium perfectly regaining its normal appearance. In Sturmdorf's case, the growth was extirpated during labor, while "the fetal head was pointing at the vaginal outlet"; but, although the tumor's "surface was transversed by a network of tortuous and dilated veins," it was successfully removed, permitting "prompt spontaneous delivery."

I have found no record of any labial lipoma recurring after removal, and no report of serious or fatal consequences. The fact that such a growth may easily become large enough to interfere with walking and the sexual functions seem to offer abundant reasons for its early removal.

10. Christopherson, J. B.: A Curious Case of Lipoma, J. Roy. Army Med. Corps **6**: 355 (March) 1906.
11. Goodell, W.: Lessons in Gynecology, Ed. 3, Philadelphia, F. A. Davis Company, 1891, lesson 45, p. 87.
12. Emmet, T. A.: Principles and Practice of Gynecology, Ed. 2, Philadelphia, H. C. Lea's Son & Co., 1880, pp. 601-602.

CHRONIC OBSTRUCTIVE JAUNDICE (NONCALCULOUS)

REVIEW OF NINE CASES TREATED BY CHOLECYSTOGASTROSTOMY *

WILLIAM A. DOWNES, M.D.
NEW YORK

It is unusual for growths involving the head of the pancreas to produce obstruction to both the common bile duct and the duodenum to such a degree that, if benefit is to be derived from an operation, it will be necessary to drain the stomach as well as the biliary passages. For this reason, I shall report the history of a patient suffering from such a growth, in whom symptomatic relief was obtained by combining cholecystogastrostomy with gastrojejunostomy. At the same time, I shall review briefly the histories of eight other patients operated on for the relief of chronic obstructive jaundice. If it is possible to establish suitable drainage sufficiently early in these cases, symptoms resulting from the obstruction will be relieved; but the final outcome will depend on the nature of the primary disease. Should chronic pancreatitis, or other nonmalignant condition, be the cause, a cure may result. Fortunately, in nearly all cases of noncalculous obstruction of the common bile duct, the gallbladder is large and freely movable. The walls are usually in good condition, and an anastomosis to some part of the intestinal tract, preferably the stomach or duodenum, is a fairly simple and safe procedure. Diseases producing the symptoms for which this type of operation is advised or undertaken are often malignant in character, and, for this reason, these operations are usually referred to, and generally thought of, as palliative operations.

Since the diagnosis in many cases of chronic jaundice remains doubtful, even after the abdomen is

* Read before the Southern Surgical Association, Memphis, Tenn., December, 1922.

opened, because it is not always practicable or even desirable to remove a portion of tissue for microscopic examination, a supposed palliative operation may prove to be a curative one. The symptoms are relieved, and the patient is restored to health, while Nature in some way makes provision for the disabled organ which causes the trouble. The final outcome in every case of obstructive jaundice, unless relieved by operation, is so certain that all those in reasonably good condition deserve the benefit of an exploratory operation.

The first patient in this series was operated on, four and one-half years ago. The preoperative diagnosis was common duct obstruction, probably due to stone. At operation, the gallbladder and common duct were greatly distended; but no stones were found. The pancreas was moderately enlarged, nodular and hard as stone throughout. The diagnosis was carcinoma of the pancreas. This patient made an uninterrupted recovery. Jaundice disappeared entirely in three weeks, and he has remained well to the present time. It is evident that this condition was chronically inflammatory and not malignant.

Since operating on this patient, I have performed the operation of cholecystogastrostomy eight times for the relief of chronic obstructive jaundice. Four of the nine patients suffered one or more attacks of pain. Two of these had calculi in the gallbladder; one, a number of small stones, and the other, a single large stone. In none of the cases was a stone found in the common duct. The gallbladder and ducts were distended in all cases—some to only a moderate degree, others, enormously. The walls of the gallbladder were described as thinned or thickened in varying degrees. The pancreas showed definite pathologic changes in eight of the cases. In two, it was symmetrically enlarged throughout. In one, the midportion was the seat of a bulky tumor. In one, the head was thickened but smooth, and there were areas of yellowish subperitoneal fatty deposits, suggestive of fat necrosis. In four instances, it was hard as stone, nodular and irregular. On two occasions, it was thought that a separate nodule could be palpated at the location of the diverticulum of Vater; but these observations were not verified by exploratory incision into the duodenum. In one case, the pancreas appeared to be perfectly normal, and the obstruction was due to an anomalous vessel, an artery about the size of the radial, which crossed the common duct just as it disappeared behind the duodenum. The jaundice was classed as moderate in five cases and severe in four. Its duration was from three weeks to three months, except in the patient with the anomalous vessel, in whom it had been intermittent for more than ten years. Weakness, loss of weight and digestive disturbance either preceded or soon followed the jaundice. Nausea and vomiting occurred to a certain extent in all cases; but, in one instance, they were so severe that the patient was unable to retain food of any sort. Two patients gave a history of chills and fever, and itching was a distressing symptom in five.

During the period in which these nine patients were observed, a number of other patients with chronic jaundice were operated on for one cause or another; but, as the methods adopted were different, the histories are not included in this report. Suffice it to say that in all cases in which an anastomosis of the gallbladder to the intestinal tract seemed to offer the hope of draining the bile passages, cholecystogastrostomy was performed. The stomach was chosen as the site for the anastomosis for the reason that it is easier and safer, in the average case, to suture the gallbladder to this viscus than to the duodenum. All nine patients on whom this operation was performed made good operative recoveries. Technically, the operation offered little difficulty, as the gallbladders were large and freely movable—the fundus lying over the pyloric end of the stomach at about the point where the union should be formed.

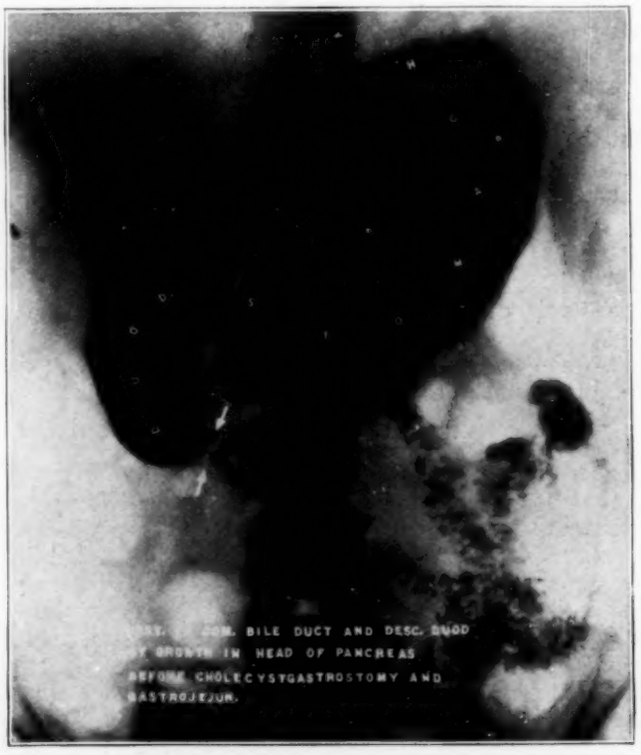


Fig. 1 (Case 8).—Appearance of gastro-intestinal tract, twenty minutes after the ingestion of a barium meal.

TECHNIC OF OPERATION

The gallbladder is aspirated and a transverse incision, 1½ inches (3.8 cm.) long, is made just below the apex of the fundus. This opening is united by three rows of sutures to one of a similar length in the stomach, just proximal to the pylorus. No clamps are used. Use of the suction apparatus aids greatly in keeping the field clean. Apparently, the thinness or thickness of the gallbladder wall is not significant so far as obtaining union is concerned.

RESULTS OF OPERATION

The convalescence of most of these patients was unusually smooth. The presence of bile in the stomach did not cause discomfort or increase the tendency to postoperative vomiting. As a matter of fact, the bedside notes show that five patients did not vomit following the operation; two vomited only once; one, several times during the first week, and in one, there was considerable vomiting on the twentieth day. This patient developed an acute dilatation of the stomach, which was promptly relieved by lavage. It is a general observation of all surgeons who have performed cholecystogastrostomy that the passage of bile through the stomach is harmless. The average stay of the patients in the hospital was twenty-six days. At the time of

discharge, the jaundice had entirely disappeared in all but one patient. This was undoubtedly a case of carcinoma of the diverticulum of Vater, which was almost a mahogany color—a slight tinge remaining on the twenty-fifth day.

The general symptoms, such as itching, dryness of the skin, nausea and vomiting, were entirely relieved. There was marked improvement in the strength of all but two patients. The histories of the patients since leaving the hospital reveal that four are perfectly well —one, four and one-half years after operation; one, nearly four years; one, two years and eight months, and one, eight months. One died at the end of one and one-half years. This man had resumed his work as a carpenter and was apparently in good health. He died suddenly following an unusual effort. Two died four months after operation, from extension of the disease. The two remaining patients (Cases 8 and 9) have been operated on too recently to warrant an opinion as to the outcome. One of these (Case 8) is the one in whom there was obstruction to the descending portion of the duodenum, as well as to the common bile duct. A brief history of this case is reported herewith.

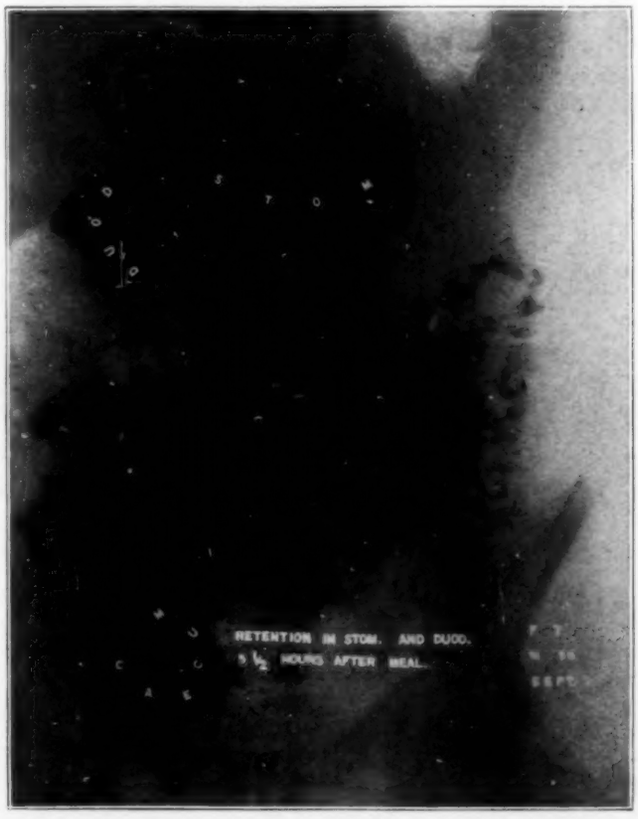


Fig. 2 (Case 8).—Appearance of the gastro-intestinal tract, five and one-half hours after the ingestion of a barium meal.

REPORT OF CASE

History.—F. T., a man, aged 56, was admitted to St. Luke's Hospital, Sept. 14, 1922, complaining of nausea, vomiting, weakness and itching of the skin. The present illness had begun about six months previously with indigestion and a tendency to tire easily. Careful examination at that time, including a barium meal, was negative, except for the presence of slight anemia. Early in the preceding summer he had gone to Scotland, and, although he suffered from a severe attack of diarrhea on the way over, he was much improved. In August, however, indigestion became worse and was soon followed by nausea and vomiting, so that by the time he returned home (September 1) he was unable to take, or to retain, solid food. About this time, jaundice appeared, which had gradually increased up to the present time. Recently, itching had become so troublesome that it kept him awake at night. The urine was very dark, and the stools were clay-colored. He had suffered no pain at any time. He had lost from 20 to 30 pounds (9 to 13.5 kg.) in weight. He had suffered from chronic constipation and occasional atacks of indigestion.

Examination.—The patient was a well-developed man, who appeared to be chronically ill. There was evidence of loss of much subcutaneous fat. The skin and sclera showed a marked yellowish tinge. The head and neck were normal. The lungs were clear. The heart was not enlarged, and there were no murmurs. The contour of the abdomen was normal. The presence of fluid was not demonstrated. The liver and gallbladder were not felt. There was a definite mass, about 2 by 3 inches (5 by 7.6 cm.), which was hard and movable, immediately to the right of the median line, at about the normal location of the pancreas. The extremities were normal.

Laboratory Findings: The red blood cells numbered 4,704,000; hemoglobin, 50 per cent.; white blood cells, 70 per cent.; polymorphonuclears, 70 per cent.; neutrophils, 30 per cent. The morphology was normal. The Wassermann reaction was negative. Examination of the urine was negative; that of the stool was positive for blood.

Roentgen-Ray Findings: There was a lesion involving the pyloric end of the stomach and the second portion of the duodenum, with a twenty-four hour retention of barium in the stomach and duodenum. The possibility of a pancreatic lesion was considered, and it was believed that these findings merited surgical exploration. The diagnosis was carcinoma of the head of the pancreas, and obstruction of the common bile duct and second portion of the duodenum.

Pathologic Findings: The gallbladder and common duct were greatly distended. The head and body of the pancreas were hard, nodular and enlarged. The duodenum felt normal to the touch, but the descending portion was fixed to the pancreas. The liver appeared to be normal. The gallbladder did not contain stones, nor could stones be palpated in the common duct.

Operation and Result.—Sept. 22, 1922, a cholecystogastrostomy, combined with gastrojejunostomy, was performed, employing a button for intestinal anastomosis. The gallbladder was united to the anterior wall of the stomach, just proximal to the pylorus, by three rows of sutures—the two outer rows being silk and the inner row, chromic catgut. Before completing the anastomosis, one half of the button was dropped into the stomach. The posterior wall of the stomach was then exposed through a small opening in the transverse mesocolon, and the anastomosis to the jejunum rapidly completed by the use of the button.

Blood transfusion was given on the fifth day after operation. Convalescence was slow but satisfactory. All evidence of jaundice had disappeared at the end of three weeks. The patient did not vomit following the operation, and he is now able to take all sorts of food. Two weeks after discharge from the hospital, there was a definite increase in the size of the pancreas, accompanied by pain in the back. The patient was then referred by his physician to Dr. Pfahler of Philadelphia for deep roentgen-ray therapy. Under this treatment, there has been marked reduction in the size of the growth, with general improvement in health.

In 1916, Erdmann and Heyd[1] reported a case in which cholecystogastrostomy and gastrojejunostomy were performed at one operation. The patient was in good condition, six months later. More recently, Spencer[2] of London described a case in which cholecystoduodenostomy was followed in three weeks by gastrojejunostomy, and the man lived for five years, dying of scirrhous cancer of the pancreas. Such results

1. Erdmann, J. F., and Heyd, C. G.: Am. J. M. Sc. **152**: 174 (Aug.) 1916.
2. Spencer: Brit. J. Surg. **10**: 303.

in a class of cases usually looked upon as hopeless warrant the risk involved in undertaking these operations.

Reviewing the histories of the cases forming this report and checking up the findings at operation with the subsequent history of the patients, I am impressed by the fact that in only three of the first seven cases in which operation was performed was I able to make a prognosis with a fair degree of certainty. Ordinarily, the failure to differentiate, in less than 50 per cent. of cases, a malignant from a nonmalignant tumor by the feel would be embarrassing; but, if one recalls the variations in size, density and shape of the apparently normal pancreas, such mistakes are more easily forgiven.

Certain procedures, such as forced fluids by mouth, if possible, glucose solution by rectum, and saline solution injected under the skin, employed over a period of days, are of great value in the preliminary preparation of these patients for operation. It is important to have the blood grouped, and to be prepared to give blood transfusion, either before or after operation. Furthermore, it is very important to avoid unnecessary trauma during operation. The abdomen should be explored, and the various organs palpated with great care. Hemorrhage, started from lacerating the tissues, or from the forcible separation of adhesions, may be difficult or impossible to control. When one is in doubt, the common bile duct or duodenum should not be explored. It is better to leave an occasional stone than to cause the death of the patient by searching for it. I doubt the wisdom of ever cutting into the pancreas in deeply jaundiced patients for the purpose of removing specimens for pathologic examination. Such incisions serve no useful purpose, so far as the individual is concerned, and may lead to irremediable harm.

Fig. 1.—Anatomic model showing gasserian ganglion, internal carotid artery, carotid sympathetic plexus and related structures. The circle encloses the paratrigeminal area.

CONCLUSIONS

All patients suffering from chronic obstructive jaundice should be operated on, as surgery offers the only hope of relief. Internal drainage of the bile ducts is preferable to external drainage, just as it is desirable, when possible, to anastomose around inoperable growths in the intestine in order to avoid the formation of an artificial anus. The slightly greater risk involved in anastomosing the gallbladder than in establishing simple drainage is more than offset by the increased comfort of the patient, plus the added advantage of retaining the biliary secretion. Besides, in the event of a cure by external drainage, a secondary operation is necessary in order to close the fistula. I have found it easier to unite the gallbladder to the stomach than to the duodenum, and, since the passage of bile through the stomach is harmless, I consider cholecystogastrostomy the operation of choice.

424 Park Avenue.

LESIONS OF THE PARATRIGEMINAL AREA

LOYAL E. DAVIS, M.S., M.D.
Fellow of the National Research Council
CHICAGO

The results of the surgical treatment of trigeminal neuralgia are brilliant and extremely gratifying to patient and surgeon alike. Section of the sensory root of the fifth cranial nerve offers immediate and lasting relief from an excruciating pain which defies description. Among an appreciable number of patients suffering from a true major neuralgia involving the trigeminal nerve there is a small number complaining of pain in the face which must be differentiated from typical trigeminal neuralgia. These patients offer a real differential diagnostic problem because surgical measures directed toward the fifth cranial nerve usually offer no relief.

The history given is that of a deeply situated, dull ache occurring in one or more of the areas supplied by the divisions of the trigeminal nerve. It may be more or less continuous and attended by exacerbations, and it may spread from one divisional area to another. The important point to be noted is that there are no sudden attacks of severe neuralgic pain causing untold agony and suffering; there are no dolorogenic zones, the slightest stimulation of which occasions a paroxysm of pain; there is not that state of apprehension in which the patient feels that the examiner may touch the face and produce a pain. These patients do not reach that state of mental depression induced by suffering which welcomes death as a relief from the pain. In short, the complaint and the appearance of patients with trigeminal neuralgia are entirely lacking.

Yet this group of patients suffer pain, often prolonged, and to dismiss them with the diagnosis of an indefinite infection headache is an injustice. They have been subjected to numerous roentgen-ray examinations of the teeth and accessory nasal sinuses; they have had their tonsils removed, and still they suffer. It is usually after such procedures that they are referred to the surgeon for resection of the sensory root, only to be told, after careful examination, that resection cannot definitely promise relief. Sluder [1] has described a group of patients presenting symptoms of such a nature, and has attributed the pain to a sphenopalatine ganglion neuralgia. He has given relief to these patients by injection of the ganglion. He has offered preliminary cocainization of the ganglion as a differential diagnostic point between this class and those suffering from a major neuralgia, for the application of a swab of cocain solu-

1. Sluder, Greenfield: Concerning Some Headaches and Eye Disorders of Nasal Origin, St. Louis, C. V. Mosby Company, 1918.

tion on the mucous membrane overlying the sphenopalatine ganglion offers immediate relief.

Three cases are here reported presenting pain in the distribution of the trigeminal nerve, entirely unlike a major neuralgia, none of which belong to the group described by Sluder. One of these cases was differentiated by the use of cocain applied to the sphenopalatine ganglion; in another, the lesion was verified at necropsy, and the description of the third case, found in the literature, excludes this condition very definitely.

REPORT OF CASES

CASE 1.—Mrs. E. S., aged 73, gave a history of a dull, heavy ache in the right maxillary and ophthalmic areas, which seemed to be deeply situated. The pain had been present for ten months. It had never involved the area supplied by the mandibular division. The patient suffered more or less continuously, but careful examination of the external surface of the face and within the mouth did not detect any dolorogenic zones. She was quite positive that there were no particular stimuli which produced the pain.

She had many roentgenograms taken of the accessory nasal sinuses and had all of her remaining teeth removed, without relief. Her tonsils were present, but examination did not reveal any inflammation or infection, and gave no indication for tonsillectomy as far as the tonsils themselves were concerned. Examination of the nasal accessory sinuses failed to detect any pathologic condition, and repetition of the roentgen-ray examination confirmed the previous negative results. A careful physical and neurologic observation revealed a moderate degree of generalized arteriosclerosis, a right enophthalmos with drooping of the right upper eyelid, a slightly smaller pupil on the right, and increased lacrimation on the right. The extra-ocular muscle movements were perfectly normal; there was no diplopia, and the pupils reacted to light and accommodation. There was no paresis or paralysis of the muscles supplied by the motor division of the fifth nerves, and sensation over the face was quite normal to all stimuli. The ciliospinal reflex, producing dilatation of the pupil by pinching the skin of the neck, was present on the left side but absent on the right. One drop of a 5 per cent. cocain solution in each eye produced unmistakable dilatation of the left pupil, but no change in the right. Under the influence of this solution, both pupils reacted to light. No other cranial nerves were involved, and otherwise the examination was entirely negative.

Four months prior to coming under observation, the patient had submitted to an alcoholic injection of the ophthalmic and maxillary divisions at their peripheral foramina. Loss of sensation was produced for three months, but the pain continued unabated, and she had resorted to the use of barbital (veronal) for relief. To rule out a possible sphenopalatine neuralgia, a pledget of cotton saturated with cocain solution was placed on the mucous membrane over the sphenopalatine ganglion. No relief from the pain was obtained. The maxillary division was then reached through a deep injection of alcohol, and loss of sensation was produced in the maxillary area. A later report from the patient stated that her pain was still present, unchanged.

We were dealing in this case with a lesion producing pain in the supply of the ophthalmic and maxillary divisions of the right trigeminal nerve and, in addition, with a paralysis of the sympathetic fibers innervating the right orbit, as evidenced by failure of pupillary dilatation on the application of the cocain solution, narrowed palpebral fissure due to enophthalmos, and the absence of the ciliospinal reflex on the right side.

CASE 2.—Mrs. J. N., aged 65, gave a history of attacks of pain lasting six weeks. The pain, which was paroxysmal and momentary, was located in the left lower jaw, but frequently spreading upward, involving the maxillary and ophthalmic areas. These pains were situated deeply and could be brought on by firm pressure of the tongue against the gums of the lower jaw and by pressure on the eyeball. Following the last attack of severe pain, two days prior to hospital entrance, pain of a less severe and an aching character had been almost constantly present in the same location. Physical and neurologic examinations revealed that the right pupil was smaller than the left, and both were slightly irregular. The right pupil reacted promptly to light and accommodation, but the left was slightly sluggish. There was a ptosis of the left upper eyelid, with paralysis of the extra-ocular muscles supplied by the left oculomotor nerve. The retinal veins in both eyes were dilated. There was no loss of sensation over the area supplying either trigeminal nerve, and the function of the muscles supplied by the motor division of this nerve was perfect. No other cranial nerves were involved, and examination otherwise was entirely negative. The Wassermann reaction on the blood and spinal fluid was negative.

The patient suddenly became unconscious, with the eyes drawn to the left; and loss of superficial reflexes and an increase in the deep reflexes, with a bilateral Babinski phenomenon, were noted. Death ensued within twelve hours. Postmortem examination revealed a small tumor the size of a pea on the outer coat of the left carotid artery, at the point within the skull where it turns forward to give off the middle cerebral and ophthalmic arteries and just medial to the gasserian ganglion. There was a diffuse hemorrhage between the dura and arachnoidea at the base, and the meninges were adherent to the vault of the skull. Section of the tumor mass revealed that it was an aneurysm of the wall of the carotid artery.

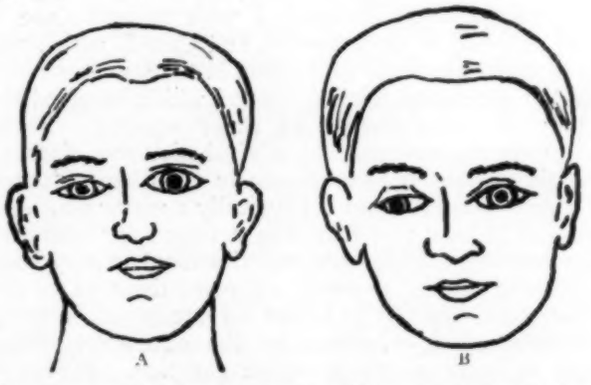


Fig. 2.—*A*, enophthalmos in Case 1, with narrowed palpebral fissure and failure of the right pupil to dilate after the application of cocain solution; *B*, ptosis in Case 2, with paralysis of the extra-ocular muscles supplied by the oculomotor nerve and dilated pupil.

This case is the exact opposite of the previous one. A patient suffering pain in the left trigeminal area was believed to have trigeminal neuralgia. However, the ptosis and dilatation of the pupil, and the paralysis of the extra-ocular muscles supplied by the third cranial nerve pointed unmistakably to a paralysis of the left oculomotor nerve.

CASE 3.—Ræder,[2] in 1918, reported the case of a youth, aged 18, who complained of pain in the left eye that radiated to the entire left trigeminal area. The left pupil was small, there was a slight drooping of the upper lid, the eyeball was somewhat sunken, and the left palpebral fissure was narrowed. Intra-ocular tension was decreased in the left eye, and, on instillation of cocain solution, the pupil of this eye did not dilate. The left pterygoid and masseter muscles were paretic, and movements of the eyeball in every direction were somewhat impaired, although the patient did not complain of diplopia. There were no vasomotor changes present on the left half of the face. A diagnosis was made of a paratrigeminal lesion involving the region between the gasserian ganglion and the internal carotid artery, with infiltration of the sympathetic fibers passing from the carotid plexus to join the oculomotor and trigeminal nerves. Necropsy revealed a small, grayish red tumor occupying the space between the left

2. Ræder, G.: Report of a Case of Endothelioma in the Paratrigeminal Area, Norsk Mag. f. Lægevidensk. **79**, 1918; abstr., Practical Medicine Series **8** (Neurology and Psychiatry), 1918.

gasserian ganglion and the hypophysis. The oculomotor nerve passed above the tumor, which infiltrated the sympathetic fibers and completely surrounded the internal carotid artery except on its medial surface. Histologic examination of the tumor proved that it was an endothelioma.

COMMENT

Many instances are on record of involvement of the sympathetic fibers in the spinal canal and in the neck, due to trauma, or pharyngeal or cervical gland tumors. These cases are characterized by excessive sweating and other vasomotor phenomena on the affected side, in addition to the presence of Horner's syndrome. The cases under discussion lacked these symptoms and other symptoms of spinal or cervical pathologic changes, which has led us to believe that the sympathetic fibers surrounding the external carotid artery were intact and the lesion, consequently, was within the cranium. Likewise, tumors originating within the gasserian ganglion have been reported wherein the surrounding structures have been involved by an extension of the growth. The previously cited cases involved the trigeminal nerve incompletely, and the involvement was secondary to pathologic conditions originating elsewhere in the paratrigeminal area.

Ræder failed to find a report of a similar case in the literature. To his case, I wish to add Case 1, which clinically is quite similar, and Case 2, which was proved to be the result of a lesion in the same anatomic area, but the pathologic changes of which involved the oculomotor nerve instead of the sympathetic fibers, thus producing an opposing clinical picture. Each of these three cases presented pain in the distribution of the trigeminal nerve, but not typically a major neuralgic pain, and at least two had been referred for operative procedures directed toward the trigeminal sensory root. In addition to the presence of pain, these cases are characterized by the presence of symptoms directly attributable to involvement of the structures immediately adjacent to the gasserian ganglion. Figure 1, the reproduction of a model, presents the anatomic relations of the structures in the paratrigeminal area; and it can be readily seen that it would be possible for a very small lesion to involve the sympathetic fibers, and the oculomotor, trochlear and the abducens nerves in various combinations with the gasserian ganglion.

It is probable that the extent of the pain in these cases depends on the amount of involvement of the gasserian ganglion. Langley [3] has shown that stimulation of the caudal end of the cervical sympathetic trunk does not produce any changes in respiration or blood pressure that might be taken as evidence of pain. He failed to find any facts supporting the presence of a reflex action within the cervical sympathetic trunk; and histologic examination of the cervical sympathetic has demonstrated the absence of fibers that might transmit pain impulses. Nevertheless, it is true that alcoholic injections which relieve the pain of a true trigeminal neuralgia do not materially benefit these patients. There is the possibility that the pain present in the eye, situated deeply, may be transmitted by fibers of deep sensibility that are present in the nerves innervating the extra-ocular muscles.

SUMMARY

Attention is directed to two syndromes of the paratrigeminal area: The one characterized by paralysis of the sympathetic fibers passing from the carotid plexus, plus pain in the trigeminal area, of which we have two examples; the other characterized by pain in the trigeminal area plus paralysis of the oculomotor nerve. No doubt other combinations of nerve involvement may occur in this particular area.

2431 South Dearborn Street.

3. Langley, J. N.: Remarks on the Results of Degeneration of the Upper Thoracic White Rami Communicantes, Chiefly in Relation to Commissural Fibers in the Sympathetic System, J. Physiol. 25: 468, 1900.

TORSION OF UTERINE ADNEXA BEFORE PUBERTY

REPORT OF A CASE *

MORRIS COHEN, B.S., M.D.
Adjunct Attending Surgeon, Lebanon Hospital
NEW YORK

History.—Lillian T., aged 13, was admitted to Lebanon Hospital, in the service of Dr. Henry Roth, April 25, 1922, complaining of abdominal pain and vomiting. Her past history was uneventful. She had never menstruated, and had been well up to the onset of her illness, four days prior to admission to the hospital. At that time she was seized suddenly with sharp pain in the right lower quadrant of the abdomen. This pain soon became generalized, but on the second day the pain localized in the right lower quadrant and became very severe. The patient vomited several times after onset of the pain. On the third day of her illness, her temperature was 103 F. She complained of frequent and painful micturition, and had a feeling of soreness in the epigastrium. Before entering the hospital, the child had received numerous cathartics, which resulted in frequent fluid stools.

Examination.—On admission, the child appeared to be well nourished. She was apparently in severe pain. The eyes, ears, nose, mouth and throat presented no abnormalities. There was no enlargement of lymph nodes anywhere. The lungs were clear, and the heart sounds were rapid, regular and of good quality. The abdominal wall moved regularly with respiration, and there were no irregularities of outline. The right lower quadrant was rigid and very tender, and no masses were palpated. A rectal examination was not made. A blood examination revealed 17,800 leukocytes per cubic millimeter, with a differential count of 89 polymorphonuclears and 11 lymphocytes. Urinary analysis revealed a faint trace of albumin, but was otherwise negative. On admission, the temperature was 102.8 F. and the pulse rate, 100 a minute. Respirations were 26 a minute. A diagnosis of acute appendicitis was made, and the child was prepared immediately for operation.

Operation.—A right rectus incision was made, and when the peritoneal cavity was opened there was a flow of a moderate amount of serosanguineous fluid. In the lower angle of the incision, there appeared a large, bluish black, sausage-shaped mass, which at first sight impressed me as being a strangulated loop of intestine. This mass was carefully manipulated and traced to its point of origin—the adnexa of the right side. The mass was delivered without difficulty. It was an ovarian tumor, twisted on its pedicle, and it included the right fallopian tube and mesosalpinx. The pedicle was untwisted, and both tube and ovary were removed *en masse*. Torsion in this case followed the direction of the hands of a clock. The appendix appeared inflamed at the tip, where it was covered with fibrin and was in close contact with the adnexal mass. The appendix was removed. The anterior layer of the broad ligament on the right side was covered with patches of fibrin. The adnexa on the left side were examined, and they appeared to be normal. A cigaret drain was placed in the pelvis, and the abdominal incision was closed in layers. Recovery was uneventful, and the patient was discharged as cured, May 9.

Pathologic Report.—The appendix appeared pale, except at the tip, which was acutely inflamed. No fecaliths were

* Read before the Society of Alumni of Lebanon Hospital, Nov. 14, 1922.

present. Microscopically, the appendix appeared normal except for the serosa, which was considerably congested. The adnexal mass consisted of a horseshoe or kidney-shaped tumor measuring 12 by 6 by 3 cm. Along the concave side of the specimen was attached a uterine tube, which appeared acutely inflamed. On section, the mass felt solid. It appeared hemorrhagic. Microscopically, the section was unrecognizable as ovarian tissue. It was composed entirely of blood cells, with an occasional thin strand of connective tissue.

COMMENT

Torsion of uterine adnexa before puberty is a condition that occurs infrequently, as may be judged by the very few cases reported in the literature. Smith and Butler [1] have compiled reports of twenty-six cases of torsion of ovarian tumors before puberty; and in a review of torsion of normal adnexa, they have abstracted the histories of four cases occurring in children under 12 years of age. Of the first group, only one third were diagnosed correctly, while in another third the diagnosis of appendicitis was made. Of the four cases of twisted pedicles of normal adnexa, one was diagnosed as acute appendicitis, and the remaining three as appendical abscess.

An analysis of the thirty-one cases, including the one that I report, shows that in nine instances in which torsion occurred on the left side the correct preoperative diagnosis was made five times, and in twelve instances in which torsion occurred on the right side the correct preoperative diagnosis was made only once. There remain ten cases unclassified as to the side involved, in which the correct preoperative diagnosis was made twice. Appendicitis was the preoperative diagnosis twice in the nine cases in which the left side was involved, six times in the twelve involving the right side, and five times in the ten unclassified cases. This shows that when signs and symptoms pointed to a lesion in the lower abdomen, particularly on the right side, there was a tendency to diagnose the condition as appendicitis.

These cases emphasize the fact that, in a girl presenting signs and symptoms of acute intra-abdominal disease, torsion of the adnexa must be given serious consideration. Also, in view of the fact that symptoms of torsion of the adnexa may simulate those of various other conditions, a rectal examination may aid greatly in the establishment of a correct diagnosis. Although rectal examination of children is at best unsatisfactory, in some cases such a procedure may help considerably toward arriving at a proper diagnosis. In the case reported, it was only when the abdomen was palpated during anesthesia that the presence of a tumor was detected. A rectal examination would have modified our diagnosis, if not completely, at least to the extent of leading us to consider seriously other possibilities in addition to a probable acute appendicitis.

Smith and Butler raise the question as to whether normal adnexa can undergo torsion, and in their paper they present summaries of fourteen reported cases of torsion of normal adnexa at various ages, four of which occurred in children under 12 years of age. Whether, in the case that I report, the torsion involved a normal ovary or one modified by cystic degeneration is difficult to say; for even the pathologic examination of the removed specimen did not give us the slightest clue as to what the condition of the ovary was before torsion had taken place.

1054 Faile Street.

1. Smith, R. R., and Butler, N. J.: Am. J. Obst. & Gynec. **2**: 507-521 (Nov.) 1921.

OBSERVATIONS ON THE PRECIPITIN REACTION FOR SYPHILIS *

WILLSON B. MOODY, M.D.
OMAHA

From time to time, numerous discrepancies in the Wassermann test for syphilis have been reported, and though standardization of the test has been many times attempted, no method of standardization is as yet generally accepted. To meet this difficulty, several precipitation tests have been developed, the latest and simplest being that of Kahn, [1] modified by Herrold.[2]

The latter test is even more simple and economical than the Kahn test. It is based on the formation of a ring of precipitation of antigen when in contact with serum from a patient with syphilis. To determine the value of this precipitation reaction in the diagnosis of syphilis, parallel observations on Wassermann and precipitin tests have been made.

The antigen used was prepared according to the method described by Kahn. For the test, the antigen is diluted rapidly 1 : 10 or 1 : 12 with physiologic sodium chlorid solution, as outlined by Kahn and Herrold. A small amount of antigen is then placed in a precipitin tube (0.5 by 3 cm.), and serum (heated or unheated) is allowed to run slowly into the bottom of the tube in order to give a sharp ring of contact. Blood serum tested by Herrold [2] was unheated. In my titrations, serum heated to 56 C. for thirty minutes was used, with apparently identical results. After standing at room temperature for from one to two hours, the tubes are read against a dark background. Proper light is necessary to obtain the most accurate interpretation, and while some experience is essential, most rings are readily identified.

COMPARISON OF ONE THOUSAND FIVE HUNDRED WASSERMANN AND PRECIPITIN REACTIONS

No. of Serums	Wassermann	Precipitin
222	Positive	Positive
1,261	Negative	Negative
14	Positive	Negative
3	Negative	Positive
1,500		

In the accompanying table are the results of parallel tests of Wassermann and precipitin reactions on 1,500 serums. Complete agreement occurred in 1,483 serums; the Wassermann reaction was positive and the precipitin negative in fourteen instances, and the Wassermann was negative and precipitin positive in three. In three instances in which the Wassermann was positive and the precipitin negative, the tests were repeated and the reactions were found to agree (positive). In one case, the Wassermann was negative and the precipitin positive, and at necropsy syphilitic aortitis with aneurysm was found. In one instance with repeated tests, the Wassermann was always positive, and at no time could any trace of precipitation be made out. It is assumed that failure to agree the first time in the three serums was due to error in technic or in interpretation. It may also be noted that among the discrepancies the majority occurred early in the study and so may in large part be due to inexperience.

* From the Laboratory of the Cook County Hospital, Chicago.

1. Kahn, R. L.: A Simple Precipitation Reaction for Syphilis, Arch. Dermat. & Syph. **5**: 570-578 (May) 1922; **5**: 734-743 (June) 1922; **6**: 332-341 (Sept.) 1922.

2. Herrold, R. L.: A Ring or Contact Precipitation Test for Syphilis, a Modification of the Kahn Test, J. A. M. A. **79**: 957 (Sept. 16) 1922.

Numerous tests were made on cerebrospinal fluids, without success, the precipitin test being very unreliable. Positive reactions occurred clearly only when considerable traumatic blood was present.

In all Wassermann tests, the antisheep system was used, with amounts of serum, antigen and complement approximating 0.1 c.c., and with three antigens (10 units).

No attempt has been made to correlate the clinical findings and the results of the serologic tests, the study being limited only to the comparison of the two reactions; however, the close agreement between the Wassermann and precipitation tests on blood serums (98 per cent of 1,500 tests) renders the latter worthy of further consideration. The technic of the Wassermann test is somewhat complicated and laborious, and it is subject to modifications of such nature that among several observers varying results may be obtained on the same serums. The precipitin test is far more simple to set up and is readily interpreted. Because of its simplicity, accuracy and economy of materials and time, the precipitin test may be used to advantage parallel with the Wassermann, as an aid in the interpretation of results. When the tests agree, reasonable accuracy is assured; when there is disagreement, the tests should be repeated, and if there is still discrepancy, for the present at least, the result of the Wassermann test should be accepted.

In instances in which the two tests fail to agree, it is possible that further study of the antigens and their dilution, together with the clinical history and findings, may result in such accuracy that the precipitin test will serve as an aid in the diagnosis of syphilis.

Brandeis Theater Building.

THE USE OF CREATININ AS A TEST OF RENAL FUNCTION *

RALPH H. MAJOR, M.D.
KANSAS CITY, KAN.

Many new tests for the functional activity of the kidneys are being introduced from time to time. Most of these tests are carried out by studying the excretion of a foreign substance, usually a dyestuff, by the kidneys. One notable exception is the employment of urea as a functional test by Addis and Watanabe [1] and by McLean and de Wesselow.[2]

The frequent addition of new tests does not necessarily imply any dissatisfaction with those tests now in use, but indicates an increasing appreciation of the complex process usually designated as "renal function." Most students of kidney diseases have noted and emphasized the peculiar variability of different kidneys in the excretion of different substances. This variability calls for the employment of several tests if we wish a composite picture and not a fragmentary view of the kidney's functional activity.

Creatinin seems for many reasons to be an excellent substance for testing the functional response of the kidney. Its concentration in the blood in health is remarkably constant: its hourly excretion by the kidney is so constant that Austin, Stillman and Van Slyke [3] have advocated its use as a means of checking the accuracy of urine collections, and its daily excretion in the same individual is so uniform that Shaffer [4] has estimated its excretion to be from 20 to 30 mg. per kilogram of body weight, and has introduced the term "creatinin coefficient" to express this constant relationship.

Although creatinin is readily excreted by the normal kidney, in nephritis this daily excretion may be diminished; and, as Myers and Lough [5] have emphasized, there is often in this disease an increase in the amount of creatinin in the blood, which is of both diagnostic and prognostic value.

TABLE 1.—FINDINGS IN NORMAL CONTROLS

Case	Age, Years	Creatinin Excretion, Mg. Specimen 1	Specimen 2	Specimen 3	Phenolsulphonephthalein Percentage 1 Hour	2 Hours	Total
1	24	68	197	130	4	10	50
2	28	88	246	125	25	5	30
3	38	61	205	134	50	25	75
4	25	75	273	99	60	10	70
5	26	45	224	133	25	15	40
6	35	42	175	109	25	10	35
7	28	87	260	175	30	7	37
8	34	85	286	164	50	18	68
9	28	31	111	88	40	10	50
10	24	55	167	77	50	5	55
Average excretion		64	214	113			

Recently, we have been interested in studying the excretion of creatinin in health and in disease, and particularly the response of the kidney to a sudden increase of creatinin in the blood.

The creatinin used in these studies came from two sources: urine, and a by-product obtained in the manufacture of meat juice.[6] Identical results were obtained from the three samples of creatinin.

The following procedure was carried out in making the test: The patient voided, this specimen was thrown away and he was given a glass of water; and promptly at the end of an hour urine was obtained and labeled Specimen 1. The patient was immediately given an intravenous injection of 0.5 gm. of creatinin, drank a glass of water and again voided at the end of an hour, and this was labeled Specimen 2. He then drank another glass of water and again at the end of an hour voided, this urine being labeled Specimen 3.

TABLE 2.—VARIOUS DISEASES

Case	Age, Yrs.	Diagnosis	Creatinin Excretion, Mg. Specimen 1	Specimen 2	Specimen 3	Phenolsulphonephthalein Percentage 1 Hr.	2 Hrs.	Total
1	35	Dilatation of esophagus	26	142	85	50	13	63
2	65	Syphilis of liver	73	266	123	50	10	60
3	30	Infectious arthritis	42	198	164			
4	45	Infectious arthritis	19	169	43	13	13	26
5	49	Exophthalmic goiter	41	113	99	17	18	35
6	50	Myxedema	54	198	140	43	20	63
7	67	Exophthalmic goiter	16	108	127			
8	41	Pernicious anemia	50	221	58	20	8	28
9	42	Diabetes	41	212	128	50	15	65
10	74	Carcinoma of lip	76	226	163	40	10	50
Average excretion of creatinin			42	186	103			

---

* From the Department of Internal Medicine of the University of Kansas School of Medicine.

1. Addis, Thomas, and Watanabe, C. K.: The Rate of Urea Excretion, J. Biol. Chem. **27**: 249 (Oct.) 1916.

2. McLean, H., and de Wesselow, O. L. V.: On the Testing of Renal Efficiency with Observations on the "Urea Coefficient," Brit. J. Exper. Path. **1**: 53 (Feb.) 1920.

3. Austin, J. H.; Stillman, Edgar, and Van Slyke, D. D.: Factors Governing the Excretion Rate of Urea, J. Biol. Chem. **46**: 91 (March) 1921.

4. Shaffer, Philip: Protein Metabolism in Exophthalmic Goiter, J. Biol. Chem. **3**: 13, 1907.

5. Myers, V. C., and Lough, W. G.: The Creatinin of the Blood in Nephritis, Its Diagnostic Value, Arch. Int. Med. **16**: 536 (Oct.) 1915.

6. This by-product was supplied through the courtesy of Mr. C. B. Valentine. Prof. Graham Edgar of the University of Virginia kindly sent some creatinin prepared from the same by-product.

Care was taken that the patient emptied the bladder completely each time he voided, and that the glass of water taken each time was uniform in size, measuring 200 c.c. The creatinin solution was both prepared and autoclaved just before injection.

For the purpose of comparative study, the phenolsulphonephthalein test was employed, the dyestuff being injected intravenously. In a few of the earlier observations, the phenolsulphonephthalein test was carried out on the day following the creatinin injection, but in most instances the dye was injected simultaneously with the creatinin, and the determinations of the excretion of both substances were made during the identical periods. No untoward reactions on the part of the patient were encountered in any tests.

The creatinin determinations in the urine were made by the method of Folin; the phenolsulphonephthalein estimations were made with the Dunning and Duboscq colorimeters.

In all, more than fifty observations have been made. The first group shown in Table 1 consisted of ten normal controls. The urine of these subjects was negative, and the blood chemical findings for nonprotein nitrogen, urea and creatinin were normal.

A summary of this group of cases shows that the average excretion of creatinin during the hour following injection was three times the amount of that excreted during the hour preceding injection, and that the total excretion at the end of two hours was five times the amount.

The average values were 64 mg. for the preinjection hour, 214 for the first hour after excretion during the preinjection hour, and 113 for the second hour. The amount of urine voided varied greatly with different individuals, and some subjects showed an increased urinary output after injection. All showed an increase in the creatinin concentration of the urine; the individuals not showing any increased amount of urine had a very marked increase in this concentration, often as great as 700 per cent. This indicated an ability of the normal kidney to excrete the excess creatinin by increasing its concentration in the urine when there was no increase in urinary output.

Three of these controls gave a phenolsulphonephthalein excretion of less than 40 per cent. in two hours. Subsequent phenolsulphonephthalein tests, with no creatinin injection, yielded an excretion of more than 60 per cent. in two hours. No satisfactory explanation of this variation is apparent.

Table 2 presents the results obtained in a group of patients suffering from various diseases. None of this group had any indication of kidney disease. The urine was clear, and the blood nonprotein nitrogen, urea and creatinin showed normal values. The average excretion of creatinin following injection was even greater here than in the normal controls, as four times the preinjection value was obtained in the hour after injection, and six times as much was excreted in the two hours as during the preinjection hour. The average values were: Specimen 1, 42 mg.; Specimen 2, 186 mg., and Specimen 3, 103 mg.

A group of ten patients with arterial hypertension was studied. The results are presented in Table 3. All of these patients, when the test was carried out, had normal values for blood nonprotein nitrogen, urea and creatinin. In one patient there was a trace of albumin, with casts, in the urine, and in another a faint trace of albumin in the urine. In the eight others urinary findings were normal. In all of these patients except one, when first studied, there was an excretion of creatinin similar to that described for normal individuals. The average values for the three specimens of urine were 48, 180 and 82 mg.

One patient (Case 10) deserves especial comment. The test when first carried out gave normal values. Four days later, during an attack of acute renal insufficiency associated with edema and increase in the blood nonprotein nitrogen, urea and creatinin, the amount of creatinin recovered one hour after injection was only approximately 40 per cent. more than that excreted during the previous hour. A third test after subsidence of these symptoms indicated an almost normal excretion.

Four patients suffering from cardiac disease were studied. The results are presented in Table 4. In two of these patients, the creatinin excretion after the

TABLE 3.—ARTERIAL HYPERTENSION

Case	Age, Years	Blood Pressure		Blood Chemistry, Mg. per 100 C.c.			Urine		Creatinin Excretion, Mg.			Phenolsulphonephthalein Percentage			Comment
		Systolic	Diastolic	Nonprotein Nitrogen	Urea	Creatinin	Albumin	Casts	Specimen 1	Specimen 2	Specimen 3	1 Hour	2 Hours	Total	
1	42	180	100	31	15	1.4	—	—	39	228	161	45	10	55	
2	64	200	90	24	11	1.0	—	—	65	126	31	55	15	60	
3	60	175	90	16	17	1.4	—	—	19	250	81	13	12	25	
4	67	160	90	40	18	1.7	—	—	81	112	106	23	12	35	
5	41	165	100	41	18	1.4	—	—	40	258	70	50	10	60	
6	62	182	90	43	21	1.0	—	—	40	152	79				
7	42	180	120	30	10	1.7	—	—	58	245	130	50	10	60	
8	49	150	90	..	12	1.5	—	—	20	123	85	25	12	37	Later, phenolsulphonephthalein 70 per cent.
9	45	155	80	28	13	1.2	+	—	42	184	102	15	10	25	
10	50	220	120	44	19	1.9	+	+	40	128	79	22	15	37	
				92	45	2.9	++	++	64	90	83	10	5	15	Marked edema
					15	...	+	+	27	78	64	20	15	35	Improved

TABLE 4.—HEART DISEASE

Case	Age, Years	Diagnosis	Urine		Creatinin Excretion, Mg.			Phenolsulphonephthalein Percentage		
			Albumin	Casts	Specimen 1	Specimen 2	Specimen 3	1 Hour	2 Hours	Total
1	35	Aortic insufficiency	—	—	53	140	160	35	15	50
2	40	Myocarditis	—	—	28	284	106	60	10	70
3	40	Myocardial insufficiency	—	—	60	180	86	45	10	55
4	42	Mitral insufficiency	—	—	29	137	77	35	20	55
			++	++	39	60	49	8	10	18

test was greatly increased; one patient with a very marked edema showed an excretion slightly less than that usually obtained in normal controls, while a fourth patient (Case 4) showed at first an adequate excretion, but later, with the development of a marked anasarca, and a reduction of the total daily urine output to 300 c.c., only a 50 per cent. increase in excretion at the end of one hour. The last patient had normal values for blood nonprotein nitrogen, urea and creatinin.

A summary of the cases of nephritis is presented in Table 5. Two of the patients had a relatively mild acute nephritis and responded normally to the test. In addition to these, fourteen cases of typical chronic nephritis were studied, two of which came to necropsy.

The results of the creatinin test in these patients were uniform. In none was there an increase of creatinin excretion exceeding 50 per cent. one hour after injection; in some there was no increase, and in others an actual decrease. The average values for the creatinin excretion in this group were 43 mg. for the preinjection hour, 51 mg. for the first hour following injection, and 62 mg. for the second hour after injection.

TABLE 5.—NEPHRITIS

Case	Age, Years	Blood Pressure		Blood Chemistry, Mg. per 100 C.c.			Urine		Creatinin Excretion, Mg.			Phenolsulphonephthalein Percentage			Comment
		Systolic	Diastolic	Nonprotein Nitrogen	Urea	Creatinin	Albumin	Casts	Specimen 1	Specimen 2	Specimen 3	1 Hour	2 Hours	Total	
1	38	158	100	..	..	1.7	+	+	104	272	176	45	11	56	Acute
2	17	130	75	22	9	1.4	+	+	41	201	160	30	10	40	Acute
3	44	200	150	41	22	1.8	+	+	70	63	71	32	11	43	
4	70	145	90	..	16	1.5	+	+	27	8	38	30	10	40	
5	70	200	120	131	81	5.0	+	+	36	7	19	5	2	7	
6	56	210	135	..	13	1.7	+	+	30	45	50	8	10	18	
7	22	180	115	..	20	1.4	+	+	56	...	142	23	17	40	
8	35	180	120	34	11	2.0	+	+	16	12	12	..	..	Trace	Died, necropsy
9	52	220	135	46	26	1.5	+	+	91	122	95				
10	56	220	160	70	46	2.7	+	+	45	46	70	..	..	Trace	Died, necropsy
11	68	150	100	20	13	1.2	+	+	37	17	31	40	10	50	
12	65	160	80	..	14	...	+	+	43	63	66				
13	70	220	120	34	18	2.8	+	+	138	179	44	8	15	23	Arteriosclerosis
14	44	170	60	..	..	2.0	+	+	30	39	25				
15	56	150	80	40	22	1.0	+	+	25	9	40	15	10	25	
16	47	190	110	80	46	4.2	+	+	48	60	64	3	Trace	3	
Average excretion of creatinin in chronic nephritis (Cases 3 to 16).....									43	51	54				

Only four of the patients gave blood creatinin values above 2 mg. for each hundred cubic centimeters; six gave normal values for blood creatinin, but at the same time were unable to excrete the excess creatinin thrown into the circulation. This failure to excrete an increased amount of creatinin was apparently due to inability to concentrate this creatinin in the urine, and also to inability to make up for the failure in concentration by an increased output of urine.

SUMMARY

In normal persons and in patients suffering from various diseases with no renal lesions, the intravenous injection of 0.5 gm. of creatinin was followed by an increased excretion in one hour amounting to three times that excreted during the hour preceding injection. The total excretion at the end of two hours amounted to five times that of the preinjection hour.

In chronic nephritis, the kidney fails to respond in this manner, and in the cases studied this increase has been less than 50 per cent. In a number of these patients, no increase at all was seen.

Registered Physicians in Great Britain.—The total number of names mentioned in the British Medical Register for 1921 is reported as 45,408 for an estimated population in the United Kingdom of 46,000,000, or one physician to every 1,013 people.

THE PRECIPITIN REACTION OF THYROGLOBULIN *

LUDVIG HEKTOEN, M.D.
AND
KAMIL SCHULHOF, M.D.
CHICAGO

Thyroglobulin, first isolated by Oswald, is a comparatively constant compound in different species, except, of course, for variations in the iodin content. So far as we can learn, the antigenic properties of thyroglobulin have not been studied, and it occurred to us that it would be of interest to study them. Accordingly, we prepared thyroglobulin from beef, swine, and human thyroids in the usual way, but with special efforts to obtain as pure a product as possible.

The thyroids were freed from fat and connective tissue and torn into small pieces, which were washed in water until almost white, and then extracted in the icebox with salt solution containing a little thymol. After being filtered through paper several times, the extract was precipitated with an equal quantity of concentrated ammonium sulphate solution, and the precipitate was washed with a 50 per cent. ammonium sulphate solution, dissolved in salt solution, and reprecipitated as before. The ammonium sulphate was removed by dialysis, and the final solution given a concentration of 0.85 per cent. sodium chlorid.

For injecting rabbits, a 1 per cent. solution of swine and human thyroglobulin by weight was used, 10 c.c. being given intravenously every day for three days. Five days after the last injection of swine thyroglobulin, the serum of the rabbits gave a fairly strong precipitin titer, while the serum of the rabbits injected with human thyroglobulin was without any action. Beginning on the seventh day after the last injection, these rabbits were given a second series of three daily injections of 10 c.c., and, on the fourth day after the last injection, the serum gave a very high precipitin titer. In the case of beef thyroglobulin, 10 c.c. of a 1:250 solution was injected intravenously daily, three times; and, on the fourth day after the last injection, the serum was found to have a good precipitin titer.

The results of the tests with the antiserums prepared as outlined are given in the accompanying table, the figures of which indicate the highest dilutions of the thyroglobulins and of serums with which the antiserums would form precipitates by the contact or ring method after one hour at the room temperature. In all cases in which negative results are recorded, the tests were carried through with a series of progressive

* From the John McCormick Institute for Infectious Diseases.

dilutions of the thyroglobulin or serum in question; we did this in order to avoid the danger of being misled by failure of reaction in low dilutions of antigen due to the so-called prozone effect.

The results show that, in these experiments, beef and swine thyroglobulins acted as strictly specific precipitinogens, the resulting precipitin serums being apparently specific, each for the corresponding thyroglobulin, while the human thyroglobulin, besides a rich output of specific precipitin, also called forth, but in far smaller quantities, precipitins for swine and beef thyroglobulins and for human serum. As indicated in the table, the serum precipitins in the original antiserum for human thyroglobulin were removed by an equal amount of a 1:200 dilution of normal human serum. Appropriate tests showed that the human thyroglobulin used as antigen contained small amounts of serum proteins, but sufficient to account for the serum precipitins in the antiserum. The precipitins in this antiserum for swine and beef thyroglobulin were probably of

TITERS OF ANTITHYROGLOBULIN PRECIPITIN SERUMS

Serums of Rabbits Injected Intravenously with Beef, Human or Swine Thyroglobulin	Titers of Antiserums in					
	Beef Thyroglobulin	Beef Serum	Human Thyroglobulin	Human Serum	Swine Thyroglobulin	Swine Serum
Antibeef serum...	8,000	0	0	0	0	0
Antihuman serum, original.....	8,000	0	1,000,000	1,000	25,000	0
Antihuman serum, after mixing with equal quantity of 1:200 dilution of human serum and removing the precipitate that formed on standing.....	2,000	0	640,000	20	25,000	0
Antiswine serum..	0	0	0	0	128,000	0
Normal rabbit serum.....	0	0	0	0	0	0

the nature of so-called minor precipitins; at any rate, mixing the antiserum with two parts of swine or beef thyroglobulin solution 1:3,000, and removing the precipitate that formed on standing, deprived the antiserum of all power to react with either of these thyroglobulins, while it still reacted with human thyroglobulin solution at 1:256,000. Similar treatment of the antiserum with human thyroglobulin, on the other hand, removed all precipitins completely. Even mere dilution of the antiserum with three parts of salt solution was enough to suppress the reactions with swine and beef thyroglobulins, the titer in human thyroglobulin being reduced merely in proportion to the dilutions.

The injecting of rabbits with extracts in salt solution of thyroids removed from exophthalmic goiter patients (by Dr. George W. Crile in Cleveland and Dr. J. F. Jaros in Chicago) caused the formation of precipitins for human thyroglobulin, from normal as well as exophthalmic thyroids; and in such antiserums, too, minor precipitins acting on swine and beef thyroglobulins were present also.

SUMMARY

The results of this work indicate that human thyroglobulin, prepared as described, contains a main, strictly specific antigen and also lesser antigens that in the rabbit may call forth precipitins for thyroglobulins of other species. Perhaps closer study may reveal several thyroglobulins in other species also; but the beef and swine thyroglobulins used in these experiments acted as strictly specific antigens.

DENGUE FEVER IN LOUISIANA

L. C. SCOTT, PH.D., M.D.
Medical Officer in Charge, Bureau Venereal Diseases, Louisiana State Board of Health
NEW ORLEANS

The epidemic of dengue fever that prevailed in Louisiana from the early part of September until the latter part of December, 1922, was doubtless introduced into the state from Texas. Reports indicate that Galveston and Houston had been suffering from this disease for some time, and the case dissemination followed closely the course of the Southern Pacific Railroad, the main line of communication between the two states.

Shortly after the invasion of southern Louisiana, the epidemic spread diagonally northwest, toward Shreveport, closely approximating the Texas and Pacific line. Subsequent invasion of other cities to the right and left of both railway systems followed in due course.

It is quite impossible to know accurately the actual number of cases that occurred; the official reports so far received show less than 8,000. A survey made during the early part of the epidemic indicated that only a fraction of the cases that occurred were reported by the practitioners. The reasons are at once apparent when one remembers that the physicians in many localities were suddenly overwhelmed with work, and that the slight danger resulted in an indifference, so that many persons were seen not at all or, at most, only once or twice.

During the survey it was noted, and as the epidemic progressed it became increasingly clear, that this acute infectious disease did not always present the typical symptoms of dengue. In fact, there was such great variation that physicians were often in doubt as to what they were really handling. Coupled with the ever present specter of yellow fever in Louisiana was the tradition that the latter disease followed closely on the heels of a dengue outbreak. It is probable that there is some rational basis for this tradition, a fact which has only been recently appreciated, viz., that both diseases are transmitted by the same vector, *Aedes aegypti*. This insect, formerly known as *Stegomyia fasciata, S. calopus* and *Aedes calopus*, and commonly called the "yellow fever," "tiger," "house," "day" and "calico" mosquito, is widely disseminated throughout all sections of the state. It breeds exclusively in cisterns and back yard litter, such as empty cans, bottles, jars, troughs, sagging or blocked gutters—in fact, any receptacle that will contain a teaspoonful of water long enough for the eggs to develop. Not infrequently this plague of the Louisiana rural districts is found breeding in the water pitchers within the house itself. Flying by day, it is encountered with monotonous frequency in the living and bedrooms of unscreened dwellings, between the hours of 9 or 10 in the morning and 4 or 5 in the afternoon. During the survey, *Aedes*, gorged with the blood of dengue patients or in the process of feeding, was observed very often.

PREPARATION OF A QUESTIONNAIRE

The variation in symptoms and degree, and the fact that occasionally the conviction was expressed that the prevalent disease was an aborted or modified form of yellow fever, led to the preparation of a questionnaire, a copy of which was sent to every physician in Louisiana. Altogether, about 2,000 physicians were circularized;

of this number, 442 replied. Since a number of the replies contained the simple statement that no cases had been encountered, or were otherwise unsuitable, 333 were selected as being representative, and the information obtained from them forms the basis for the present article. The results represent approximately 6,000 points.

In the formulation of the questionnaire it was necessary that the principle of brevity be in accord with the clarity of purpose of each question, a combination which it was hoped would at once induce the physician to take the trouble of answering, at the same time giving the maximum amount of useful data. The shortcomings were more easily recognized after the answers had been received and the contents tabulated. Many other points, such as relative percentages, could have been required without sacrificing space; as a matter of fact, they were frequently offered voluntarily, though for lack of definite request there was lack of uniformity.

The questionnaire asked for a general impression, based on personal experience, of the course of the disease. The number of cases reported is naturally only an approximation, but I venture to think it is a fairly accurate estimate of the number of cases that occurred in the state. In a large group of figures such as was supplied by the questionnaires, the exaggerations above and below the true status would tend to equalize one another in the general averages. As the data can be expressed numerically for the most part, this principle would hold for each reply.

It was believed that the twenty questions here reproduced would sufficiently cover the situation, while physicians were invited to offer additional remarks on points not covered by the questions on the reverse side of the questionnaire blank:

1. How many dengue patients did you attend?
2. Did there appear to be an incubation period (how long)?
3. What was the nature of the prodromal symptoms (how long)?
4. Did headache, pains or fever predominate in ushering in the acute onset?
5. Temperature: height and variations; relation to pulse?
6. Nature of pains (joint or muscular)?
7. Was there conjunctival injection?
8. Were there oral, nasal or gastro-intestinal symptoms (nature)?
9. Was there a flush or cyanotic condition of face or body preceding onset (nature, location)?
10. Were there remissions?
11. On what day did the remissions occur, as a rule?
12. Was there a rash present (day of disease, nature of rash, location)?
13. Was there any icterus? If so, at what period of the attack?
14. Any "black vomit" unaccounted for?
15. How long (days) did the attack last?
16. Was convalescence prolonged (great depression, etc.)? Any relapse?
17. Have you reason to suspect that dengue was an aborted or atypical form of yellow fever?
18. Were *Stegomyia* ("tiger," "day") mosquitoes numerous in houses of patients?
19. To what do you assign the cause of the decrease in number of cases (weather, screening, etc.)?
20. Were there any deaths attributable to dengue (ages, complications)?

NUMBER OF CASES

The number of cases estimated to have occurred within the state by 333 physicians is close to 30,000; actually, 29,827 were reported on the questionnaires, while additional unclassified reports bring the total to 31,955. The number reported so far to the Louisiana State Board of Health up to date is 7,560. The impression derived during the survey is that the estimate is more nearly correct. On the basis of the final estimate, approximately 1.74 per cent. of the population of Louisiana suffered from the disease, i. e., there was a morbidity rate of 1,740 per hundred thousand. The rapidity with which it spread to virtually all sections of the state makes this feature in the epidemicity of dengue comparable to influenza; indeed, the questionnaires contain many expressions to the effect that the two diseases were in other respects very similar.

The geographic distribution of the cases, according to the southern, central and northern divisions of the state, is quite distinct. Taking the southern part of Louisiana as that part extending from the Mississippi line to the Gulf, including those parishes east of the Mississippi River, we find that 57 per cent. of the cases occurred in this district. Assuming the central section to be the territory northward from the southern Mississippi state line up to the approximate level of Vicksburg, the figures indicate very close to 10 per cent. of the total, while the northern part contains the remaining 32 per cent. It is quite obvious that the distribution depends to a great extent on the relative density of population, including, as the northern and southern divisions do, the large cities of Shreveport and New Orleans. Even though this is the case for the territory as a whole, it is quite probable that other conditions influenced the number of cases occurring in these two cities. Whatever these may be, the fact remains that the number of cases estimated to have existed in Orleans Parish is less than half the number of those given in the questionnaires for Caddo Parish, where the city of Shreveport is located, though the ratio between the populations is, respectively, 4.5 to 1. It is possible that attention to the eradication of the back yard mosquito breeding places has been more concentrated and effective in New Orleans than it has been in Shreveport. This would naturally be expected, since the demand and attainment of this objective has, in the case of New Orleans, the background of past experience with yellow fever epidemics which Shreveport has never had to even approximately the same degree.

INCUBATION PERIOD

The limits fixed for the incubation period vary between 3.4 and 6.7 days. This gives a general average of five days from 59.16 per cent. of definite answers to this question; while 16.22 per cent. answered in the negative, meaning probably that no period was perceptible, and 12.31 per cent. stated that the incubation was either uncertain or unknown. The same percentage offered no comment whatever.

It will be readily understood that this question can be very difficult to answer with any degree of accuracy, and the opinion will depend on a number of factors, the most uncertain of which will be the statement of the patient regarding a possible exposure.

PRODROMES

The prodromal symptoms, according to the records of the physicians, vary from four hours to six days. Obviously, the latter period is due to faulty observation and conclusions. The average seems to be about 1.8 days, or forty-three hours, though they may vary with the individual. Only twenty-eight answers to this phase of the question were given, so that the result

cannot be said to be dependable. Approximately 19.82 per cent. of the replies stated that the onset was either sudden, without any noteworthy prodromes, or the simple statement was made that none were noted.

Malaise is an expression by which the preliminary symptoms are described, though it is qualified in many cases, and, it may be assumed, comprises a number of manifestations not ordinarily included in the definition of the term. Thus the prodromal symptoms may be present as a mild conjunctivitis or coryza, together with indefinite aches and pains, sore throat, headache, nausea, anorexia, muscular soreness and backache, lassitude, languor, dizziness, and a slight chill or at least a feeling of chilliness. Two or three or more of these symptoms were noted by 51.35 per cent. of the practitioners, while 33.63 per cent. gave no answer whatever to the question. It is clear that none of these symptoms is in any way characteristic, but they are the heralds of nearly every infectious disease.

SYMPTOMS CHARACTERIZING THE ONSET

The acute attack is ushered in with headache, fever and pain. Sometimes a rigor precedes or accompanies the other three symptoms. The headache may be intense, with a feeling of tension in the eyeballs, or it may appear to be localized in the supra-orbital or occipital region. The pain in the eyeballs is often intensified on exposure to light. Again, the pains in the head are described as being neuralgic in character. Pain in the muscles, especially the lumbar group, and joint and long bone pains are almost invariably accompaniments in some degree of the three initial symptoms. These will be discussed later.

The relative percentages of observations of concomitant initial symptoms have been derived by grouping them as nearly as the replies would allow. First, the headache, fever and pain were accompanied or preceded by a chill in 9.31 per cent. of the instances. Secondly, headache, fever and pain alone as initial symptoms were noted by 86.29 per cent., while fever and pain alone, unaccompanied by headache but by a rigor, were observed by 2.7 per cent. of the physicians. Altogether, 12.01 per cent. of the replies show that a chill was present. The remaining 1.2 per cent. of the practitioners gave no answer to the question.

TEMPERATURE AND PULSE

Reports on the temperature are very complete and quite constant. The limits vary between 100.9 and 103.8 F., with a general average, which includes isolated figures arrived at by the observer himself, of 102.5. In certain instances a subnormal temperature has been observed during the period of invasion and frequently during convalescence. Exceptional temperatures as high as 106 were noted.

The pulse has been found to increase conformably with the temperatures in 44.74 per cent., and to be slower than would normally be expected in 25.53 per cent. of the cases, while the remainder of the questionnaires contained no observation on this point.

The actual pulse rates as given in the questionnaires are of no particular value in themselves, aside from the conclusions that one may derive. They varied during the fever period between 70 and 150.

JOINT AND MUSCLE PAINS

General pains in the body, which are so characteristic of dengue fever, are described in a variety of ways, which, however, leave no doubt what is meant. The muscular variety is usually localized in the muscles of the back, especially in the lumbar region. It is called backache and "spinal irritation." Aching pains in the muscles of the legs are also frequently noted.

The bone and joint pains are described as "a feeling as though the bone was being broken." The long bones, especially those of the limbs, appear to be principally involved. The joint pains are indefinite, and seem to be generally apprehended more as a feeling of soreness. No instance of swelling or inflammation of a joint is given.

These pains have been classified according to occurrence, together or as one or the other variety predominated. The percentages noted were: joint and muscle together in 37.54 per cent.; joint alone in 14.42 per cent., and muscular alone in 46.55 per cent. of the replies.

CONJUNCTIVAL INJECTION

The presence of injection of the conjunctiva was noted frequently at the beginning and during the course of the disease. It appeared in about 35 per cent. of the infections. No effort is made to interpret its significance here; it would appear, however, to be a fairly constant symptom. Affirmative replies were received from 71.17 per cent. of the physicians, while 27.03 per cent. did not see this symptom. Only 1.8 per cent. gave no answer to the question.

PRESENCE AND NATURE OF ORAL, NASAL AND GASTRO-INTESTINAL SYMPTOMS

The oral symptoms commonly noted were perverted taste, the complaint being frequently encountered that everything, even water, tasted bitter. Very competent observers noted this aberration in themselves and in their patients, and it occurred frequently as an outstanding phenomenon among the replies.

Other oral symptoms are a heavily furred tongue, ulcerated and bleeding gums, and stomatitis with hemorrhage.

The nose and throat symptoms noted were epistaxis, coryza, inflammation of the nasopharynx, often with bleeding, and tonsillitis.

The gastro-intestinal manifestations are the most constant and characteristic. Anorexia and nausea, accompanied by vertigo and severe vomiting, were by far the most frequent. Vomiting of blood and bile, tarry and bloody stools, and severe diarrhea are also frequent occurrences. Abdominal pain, apparently without special localization, and diarrhea approximating acute dysentery were also noted. According to the reports, vomiting averaged about 31 per cent. of the infections. One physician noted abdominal pain in 20 per cent. of his cases, while the reports of four physicians show an average of 12 per cent. of their patients as having diarrhea. Apparently about 45 per cent. of all patients had gastro-intestinal symptoms of some kind, though the percentages are not reliable. It is unfortunate that the percentage of patients having certain symptoms was not specified in the questionnaire. Those cited are averages of voluntary statements only, and are doubtless much fewer than would have been given had space been allotted. However, in summing up the replies to this question the results prove quite satisfactory. Thus, 38.49 per cent. of the physicians report having observed gastro-intestinal symptoms alone; 29.73 per cent., gastro-intestinal complicated by oral and nasal symptoms, and 15.02 per cent., only oral

and nasal symptoms; 9.31 per cent. either saw none at all or failed entirely to answer this question.

INITIAL FLUSH OR CYANOSIS

A flushed or cyanotic appearance of the face or body was not infrequently observed. It was thought that possibly this phenomenon might be classed as an initial manifestation, though there is some doubt as to whether it was not due to the febrile reaction. Among the replies received, 49.25 per cent. were in the affirmative, 44.45 per cent. negative, and 2.40 per cent. made no observation; at least, no definite cyanosis was seen. The remainder, 3.90 per cent., made no comment whatever.

THE REMISSION

The question of remission is an important one, because it is stated as being a characteristic of the dengue infection. Twenty physicians report the percentage of remission noted among their cases. The average is approximately 19 per cent., though the estimates vary between 2 and 60 per cent. for different localities. The percentage of replies, however, shows that remissions were observed very frequently. Thus, 76.27 per cent. of the observers noted a remission, and the remainder, 22.52 per cent., did not.

The number of days that elapsed from the commencement of the fever before the remission occurred varies between 3.2 and 4.9. The general average, taking isolated estimates, is 3.6. Roughly, this means that the remission may be expected on the third or fourth day of the disease.

The remission lasts only a short time, during which the patient may feel comparatively well; it varies from a few hours to a day or more, and the attack begins anew. No reliable data were collected on this phase of the infection, though voluntary statements were occasionally included in the replies. The fact that remissions do occur, the relative frequency of observation, and the period, is of much more importance than the length of the remission. Sometimes the question was answered by the statement that the remissions occurred daily. These replies were taken to refer to the difference between the evening and morning temperatures, and cannot be said to constitute a typical remission as the term is ordinarily understood.

THE ERUPTION

The eruption that occurs in dengue fever is of considerable differential diagnostic importance. It assists materially in deciding whether a patient is attacked by influenza, or whether the physician is dealing with an atypical case of yellow fever. Unfortunately, it is not a constant symptom; 61.86 per cent. of the questionnaires contain the observation.

The rash has been described as morbilliform, scarlatiniform, as resembling the eruption of German measles, as consisting of papules, macules or rose spots, or as being erythematous and petechial. An eruption resembling urticaria is occasionally mentioned. It may appear, or prevail, on the face, forehead, arms, trunk and limbs, or it may be disseminated over the head, face and body and the extensor surface of the arms; it may be localized on the abdomen, the chest, the back or the forehead.

The rash may appear during the febrile period, or it may occur after the fever declines. It generally terminates with desquamation and intense itching.

Though it may be earlier or later, the average period of development is on the fourth day of the disease.

The replies may be divided roughly into three types most frequently mentioned: an eruption resembling measles, which was noted in 18.32 per cent. of the answers; the scarlatiniform, in 5.11 per cent., and the urticarial form in 2.4 per cent. No eruption was seen by 10.51 per cent., and 1.8 per cent. gave no reply.

Thirty-eight physicians report the approximate percentage of their cases in which an eruption of one sort or another occurred. They vary between 5 and 75 per cent., with a general average of approximately 15 per cent.

ICTERUS

The question of the presence or absence of icterus and the day of appearance has some importance. Icterus was noted in 28.23 per cent. of the answers. The remainder of the practitioners did not see it. It seems to have been observed at very different periods of the disease, from the fourth to the seventh day, during convalescence, just after the fever declined, or shortly after it began. Furthermore, it was found diffuse or confined to the sclera and conjunctivae.

"BLACK VOMIT"

In view of the impression that many gained while noting the course of the disease, and of the rumors and reports that "black vomit", so characteristic of yellow fever, was occurring in many cases, it was decided to ask the physicians in general regarding their experience with this symptom. Of the total number replying to the questionnaire, 15.32 per cent. observed "black vomit" in some form, while 84.40 per cent. answered in the negative. Four physicians reported the percentage of their cases, and these figures vary between 2 and 10 per cent., with an average of 6 for the four observations.

It seems probable that some of these instances were true "black vomit" in the sense that the material vomited consisted of blood originating within the stomach itself, acted on by the gastric juice, while no doubt the majority owed the origin of the vomited material to blood from the pharynx, the gums, the nose or the tonsils. What part hemorrhage from gastric ulcer played is, of course, not known; but it will be recalled that hematemesis occurred frequently enough among the gastro-intestinal symptoms to make hemorrhage from the gastric mucosa and the formation of the acid hematin within the stomach, i. e., typical "black vomit," a possibility. The mention of dark colored bile as a constituent of the vomitus leads one to believe that this may have been the reason for the observation in many instances.

DURATION OF THE ATTACK

The length of an attack was often difficult to define with accuracy. Many cases were extremely mild, and seemed to last only one or two days. Probably a large number were complicated with malaria, which appreciably altered the duration and course of the dengue infection.

The average of the duration limits as recorded in the questionnaire replies varies between three and nine-tenths and eight days. The general average of the limits, together with isolated estimates, puts the duration at six days. Probably both results represent fairly correct averages for the duration of the infection, and they are borne out very well by independent averages taken on five series of from sixty-three to sixty-five replies each.

CONVALESCENCE AND RELAPSE

Prolonged convalescence with a greater or lesser degree of depression was observed by 85.59 per cent. of the physicians answering the questionnaire. Only 11.41 per cent. saw no depression, and 3 per cent. offered no reply. Weakness and asthenia frequently followed the attack, and insomnia during convalescence, was comparatively frequent. Convalescence may be prolonged for as much as three weeks.

Relapse was reported in 33.33 per cent. of the questionnaires, and 25.22 per cent. of the replies stated that no relapses had been noted. Some patients are reported as having had dengue before.

EXCEPTIONAL COMPLICATIONS AND SYMPTOMS

There appear not to have been any complications attributable to dengue as the inciting cause. The disease itself, however, was frequently superimposed on some other malady, more especially malaria in those regions in which the latter is particularly prevalent, and, of course, tuberculosis, pneumonia and organic diseases. The deaths due to the interaction of dengue with other ailments will be considered later on.

Exceptional symptoms have occurred only in women. Menorrhagia and premature menstruation were reported a number of times, and it was found by some observers that pregnant patients suffered more severely than others, though there appear not to have been abortions, and the women were delivered at term. Deaths during pregnancy complicated by dengue and other diseases have occurred. In two instances in which blood counts were made, very marked leukopenia was observed.

IS DENGUE AN ABORTED OR ATYPICAL FORM OF YELLOW FEVER?

This is the question on which it was hoped the questionnaire would throw light. In fact, it was rumors of "black vomit" as well as the atypical course so frequently spoken of as not conforming to the text-book description of dengue that instigated the questionnaire. The basis for the tradition of yellow fever succeeding the outbreak of an epidemic of dengue has already been explained.

The overwhelming mass of opinion was negative, there being 285, or 85.59 per cent. of the 333 physicians, answering with a decided no. Nevertheless, twenty-one, or 6.3 per cent., believed that it was, and some of these answers were from those with experience in yellow fever and dengue epidemics in the past. Twenty-three, or 6.91 per cent., were doubtful, and four, or 1.2 per cent., failed to respond.

That the majority opinion must be accepted in this case does not nullify the weighty arguments of others who maintain that the striking similarity of the two diseases in many cases and the mode of transmission by *Aedes aegypti* in both instances indicate not a specific organism for each one, but two organisms belonging either to the same genus or to the same family. The courses of benign and malignant tertian malaria is taken as an analogy in point.

PRESENCE OF STEGOMYIA (AEDES) MOSQUITO WITHIN THE HOUSES

Aedes aegypti, formerly known as *Stegomyia calopus* and *Aedes calopus*, and familiar to large numbers of people by the colloquial terms "little house," "tiger," "day," "calico" and "yellow fever" mosquito, is sufficiently well known to the medical profession of the state to make their replies carry weight. At any rate, if any mosquitoes were detected within the homes by the attendant physicians during their day visits, it is reasonably certain that these were *Aedes*. At any rate, 212, or 63.67 per cent., answer that mosquitoes were found in the homes of the patients, 25.22 per cent. say that none were noted, and 11.11 per cent. were either doubtful whether the species was *Aedes*, or declined to express any opinion.

CAUSES FOR THE DECREASE

Though there may have been some doubt in the mind as to the presence of mosquitoes in the houses of the patients, there is none regarding the causes leading to the decrease in the number of cases in which alterations in weather conditions prevailed or prophylactic measures were adopted. Thus, 44.45 per cent. attribute the decrease to the weather or temperature change; 11.41 per cent. to a combination of weather and screens; 10.21 per cent., to screening, and 0.6 per cent., to mosquito eradication measures. Thirty-one physicians, or 9.31 per cent., attribute the decrease to the fact that all the susceptibles had contracted the disease; 21.62 per cent. know of no definite reason for the decline, and 2.4 per cent. report no decrease.

The answers to this question show that two thirds of the observers believe that weather and screening, including, of course, the isolation of the patients under mosquito bars, as is frequently pointed out in the replies, either considered separately or as acting together, reacted to prevent the spread of the disease and to stamp out the epidemic. It is a tacit admission of the vectorship, regardless of whether they are able to make a positive identification, for the hypothesis of an air-borne dengue epidemic would certainly not be regarded as tenable by the modern physician.

DEATHS ATTRIBUTABLE TO DENGUE

No deaths attributable to dengue as the immediate cause have occurred, though there were thirty-eight in which dengue was a concomitant of some other disease. This is based on the answers of twenty-eight, or 8.41 per cent., of those who replied to this question.

The original diseases, the lethal termination of which dengue appears to have hastened are: kidney trouble, two cases; diseases of the heart and arteries, five cases; cholecystitis, one case; pneumonia, five cases; ileocolitis and gastro-intestinal disturbances in infants, two cases; diabetes, one case; tuberculosis, three cases; meningitis, one case; malaria and pneumonia combined, one case; influenza, one case; pregnancy with gastro-intestinal complications, four cases, and, finally, twelve deaths due to indefinite or undetermined causes, including those patients suffering from exposure, improper care or malnutrition. The ages varied from new-born infants to the aged. It appears that, in general, the latter have borne the infection less readily than younger persons.

SUMMARY

The data obtained from the questionnaires I believe justify the following general clinical picture of dengue fever as it occurred during the epidemic in Louisiana:

The period of incubation or invasion may vary between three and seven days, with an average of five days elapsing from the time of possible exposure until the appearance of the prodromal symptoms.

The prodromes may last from a few hours to about two days as an average, occasionally longer. They may consist of a feeling of indisposition without precise symptoms, or there may be a sensation of chilliness, indefinite aches and pains, a slight headache or a rise in temperature. There frequently is loss of appetite. In approximately 20 per cent. of the reports, the onset without noticeable prodromes is mentioned.

The acute attack is ushered in by a fever, pains, headache or chill, either two or three or perhaps all four of these symptoms being present at the same time. Chill, accompanying fever and pains or fever, pains and headache occurred forty times (12.01 per cent.) among the questionnaires. The headache may be mild or very severe, with a tendency to localization. The pain may or may not be localized in the eyeball, or it may be the muscular and joint pain which is so characteristic.

The temperature during an attack has an average approximate variation between 101 and 104 F., with a general average of 102.5. The higher average variation may be exceeded in isolated cases, reaching, in some instances, 106.

The pulse has usually been found to increase fairly proportionately to the temperature (44.74 per cent.), but many instances of a slow pulse have also been noted (25.53 per cent.). The rate varied between 70 and 150.

The muscular pain was more pronounced than the joint and bone pains, there being 14.42 per cent. accorded to the latter, and 46.55 per cent. of the replies to the former variety. Frequently (37.54 per cent.) bone and muscular pains occurred together and apparently were indistinguishable in degree of intensity. The muscular pains are most frequent in the muscles of the back, and seem to be most pronounced in the lumbar region.

The bone and joint pains are referred to the long bones and to joints more frequently used. There is no sign of acute inflammation of the joints noted.

Conjunctival injection may or may not be present. It is recorded in 71.17 per cent. of the replies.

Oral, nasal and gastro-intestinal symptoms are very frequent. They may consist of coryza, epistaxis, pharyngitis with hemorrhage, and stomatitis; bleeding and ulcerated gums and aberration in the taste sense have been noted. Nausea with intense vomiting of bile and blood are of common occurrence. Further symptoms of gastro-intestinal disturbance are the diarrheal and bloody stools. Gastro-intestinal symptoms predominate to the extent of 38.44 per cent.

A flush or cyanotic condition of the face or chest was noted in 49.25 per cent. of the replies.

Remissions were comparatively frequent, 49.25 per cent. of the answers being in the affirmative. They occurred, as a rule, between the third and fourth day of the disease.

Rash was noted by 206 observers (61.85 per cent.). It is variously described, but the morbilliform and scarlatiniform eruptions were distinguished, respectively, in 18.32 and 5.11 per cent. of the instances. It seems probable that, if the many other forms of rash had been properly described, they would have fallen for the most part within these two categories.

The rash appeared, on an average, on the fourth day.

Icterus occurred with relative frequency; ninety-four, or 28.23 per cent., of the replies note this symptom. The time of its appearance may vary from the second to the seventh day, averaging about the fourth, but these figures are unreliable. It has been known to appear after convalescence had begun.

"Black vomit," which apparently could not be accounted for as having originated from local oral, nasal or pharyngeal conditions, was remarked by fifty-one, or 15.32 per cent., of the observers. The presence of tarry and bloody stools accompanied the hematemesis frequently.

The attack may last from four to eight days, with a general average course of six days. Occasionally the duration was only two or three days, sometimes from eight to ten days, and even longer.

Convalescence was prolonged as a rule (85.59 per cent.), sometimes for two or three weeks. Depression was very frequent. In 11.41 per cent. of the instances, convalescence without marked depression is recorded. One hundred and one physicians (30.33 per cent.) report relapses.

Only twenty-one, or 6.30 per cent., of the observers suspected that the dengue fever epidemic in Louisiana was an atypical or aborted form of yellow fever; the overwhelming majority (85.69 per cent.) do not.

The presence of *Aedes aegypti* within the houses of patients was noted by 63.67 per cent. of the physicians; and, while there is no proof that it is the sole vector, it is doubtless a very active one.

Cold weather and screens were responsible for the decline of the epidemic (66.07 per cent.), while thirty-one replies (9.31 per cent.) indicate that it disappeared because all those in a community who were susceptible had had the infection.

There were no deaths directly due to dengue fever, so far as is known. Of the thirty-eight that were recorded, it was always superimposed on some other disease, though the correct diagnosis of the latter could not always be secured.

CONCLUSIONS

Comparing the general course of dengue fever in Louisiana with the standard textbook descriptions of that disease, the following conclusions seem justified:

1. With one exception, the syndrome as observed by the physicians in general throughout the state conforms very closely to the clinical entity called dengue fever. More or less deviation from the type in many instances does not in any way modify the conclusion.

2. An exception occurred in the remarkably frequent occurrence of gastro-intestinal symptoms, notably hematemesis, regardless of the source of the blood and of melena.

3. While the fact that a few of the practitioners regarded the cases as an atypical form of yellow fever is worthy of consideration, it does not warrant the acceptance of this view; the verification of such an hypothesis would demand experimental evidence.

4. The insect known as *Aedes aegypti* and commonly called the "tiger," "yellow fever," "house," "little day" or "calico" and *Stegomyia* mosquito was the principal if not the sole vector of the disease, and its widespread distribution constitutes an ever present menace, which would be acutely appreciated should one or more unrecognized cases of yellow fever be introduced into the state.

5. The principal causes of the decline and cessation of the epidemic were the sudden change to colder weather which halted mosquito breeding, and screening, including protection of patients by mosquito netting,

or both. It is possible that sanitation and destruction of mosquito breeding places around homes played a rôle.

6. Finally, the death rate from dengue itself has been nil, though as a complication of other diseases dengue may have materially hastened the outcome.

DIAGNOSIS AND RELIEF OF STERILITY

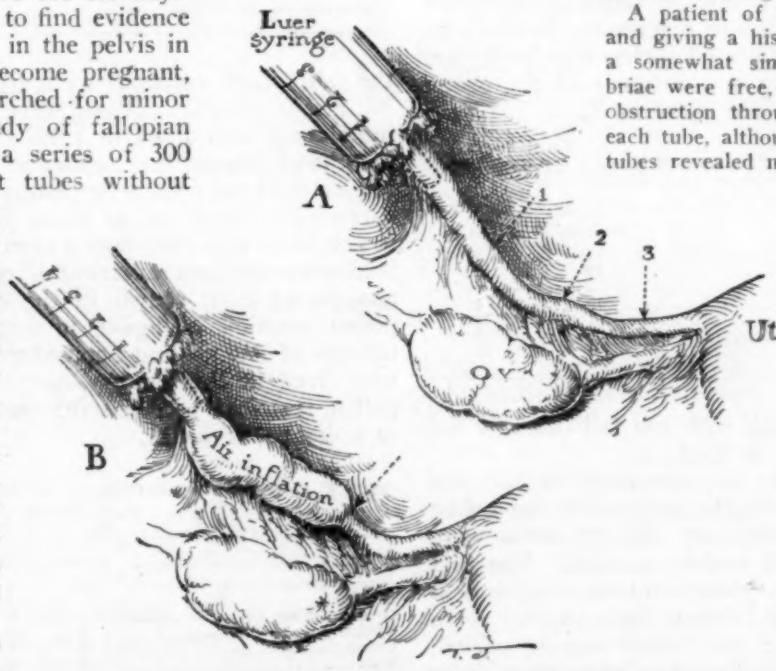
A NEW PROCEDURE *

ARTHUR H. CURTIS, M.D.
CHICAGO

Sterility in the absence of a clinically demonstrable pathologic condition of the pelvis is of common occurrence. It is probable that infection, in contrast with noninfective conditions, may be held responsible for most of these cases, if carefully employed therapeutic measures fail to relieve the sterility.[1]

In further attempts to find evidence of pathologic changes in the pelvis in women who fail to become pregnant, we have carefully searched for minor tubal lesions. A study of fallopian tubes removed from a series of 300 patients revealed that tubes without evident gross alteration, or at the most presenting only slight adhesions, quite often are crippled by healed inflammatory changes of the mucous membrane. Such lesions within the tubes easily escape detection in the operating room; palpable thickening may be wanting, and probing of the tube is a gross procedure at best.

During the last two years, when it has been necessary to open the abdomen of sterile patients, we have employed Luer syringe air inflation of apparently patent fallopian tubes. Under favorable circumstances this simple procedure is helpful in several ways; it reveals the presence of otherwise undemonstrable obstructions within the tube; minor strictures, when discovered, may be overcome by forcible syringe pressure; the anatomic limitations of grossly palpable obstruction, possibly amenable to plastic operation, may be more definitely determined, and, at the completion of plastic operations on the tube, it is possible to test the patency of the reconstructed lumen.



A, a grossly normal fallopian tube, such as is often found when surgery, performed for relief of other lesions, permits intra-abdominal examination of sterile patients: *1*, *2* and *3*, points of tubal obstruction which may escape diagnosis by direct palpation; *B*, air inflation of the tube, revealing an obstruction. Additional pressure may overcome moderate degrees of occlusion, with complete reestablishment of the lumen.

The records of a few selected patients are worthy of brief mention:

In one case of great interest, a woman, aged 34, married four and one-half years, suffered from persistent pelvic pain and complained of sterility. The husband gave a history of chronic gonorrhea, which disappeared shortly after marriage. At operation, the right tube, which was found greatly thickened, distorted and adherent, was removed. The left tube presented a few cobweb adhesions, but otherwise was grossly normal. Syringe inflation of this tube revealed obstruction 3 cm. from the uterus. Employment of considerable additional pressure resulted in free passage of air through the place of constriction, with reestablishment of the lumen. This patient is now eight months pregnant.

On three other occasions, it has been possible to demonstrate moderate obstruction of the tube associated with open fimbriae and freedom from palpable induration.

An illustration of the helpfulness of air inflation in determining the choice of surgical measures is afforded by the case of a patient, sterile since performance of an instrumental abortion, who presented a tube which appeared constricted in only one limited region. Syringe inflation demonstrated much more extensive obstruction than was anticipated, thus contraindicating plastic operation.

A patient of 40, with a uterine fibroid, and giving a history of sterility, presented a somewhat similar condition. The fimbriae were free, but inflation demonstrated obstruction throughout the mesial half of each tube, although direct palpation of the tubes revealed no more than a suggestion of thickening. Plastic operation would have been attempted if inflation had not demonstrated its futility.

COMMENT

If one fallopian tube requires removal, a second slightly diseased tube, suspected of being sterile, need not be sacrificed at the time of operation provided its lumen can be opened to the free passage of air. This conservative measure must, of necessity, be dependent on assurance that the patient will be free from exposure to subsequent venereal infection. Such tubes should be distended wih air only after complete disappearance of infection.

CONCLUSION

Air inflation of the fallopian tubes, by means of a Luer syringe placed at the fimbriated extremity of the tube, is of diagnostic and therapeutic value in selected sterile patients who are being subjected to abdominal operation.

104 South Michigan Avenue.

---

* Read before the Chicago Gynecological Society, Jan. 19, 1923.
* From the pathologic laboratory and the gynecologic service of St. Luke's Hospital.

1. Symposium on Sterility, Tr. Am. Gynec. Soc. **45**: 129, 1920. Reynolds, E., and Macomber, D.: Certain Dietary Factors in the Causation of Sterility in Rats, Tr. Am. Gynec. Soc. **46**: 99, 1921.

Household Remedies for Jaundice.—F. Fernández Martínez calls attention to an ancient Greek work which advocates the juice of *Cucumis silvestris*, the wild bitter cucumber, in treatment of jaundice and for pain in the ears and for local application to bruises. The description of its application and action in the days of Cleopatra are almost exactly the same as in our modern pharmacopeia for elaterium. His article is published in *Archivos Españoles de Enfermedades del Aparato Digestivo* **3**:593, 1920.

PROTEIN SENSITIZATION *

A. G. GOULD, M.D.
ITHACA, N. Y.

During the college year 1921-1922, a diagnostic and prophylactic study was made of the majority of male students having histories of hay-fever, asthma, eczema or recurring urticaria, at Cornell University. An attempt was made to diagnose these cases by means of allergic reactions to pollen, epidermal, food or bacterial proteins, and to desensitize the students by subcutaneous injections of the offending protein or by having them avoid the offending protein or proteins. The results of both studies are of interest, because of some new additions to the field, and because of their general agreement with the results of other investigators.

HAY-FEVER DIAGNOSTIC STUDY

Of the four kinds of disease studied, hay-fever offered the easiest approach to diagnosis. It was rare indeed to find an uncomplicated spring hay-fever case which did not respond to one or more of the group of pollen proteins which are listed in Table 1. Very

TABLE 1.—REACTIONS IN FOURTEEN CASES OF UNCOMPLICATED SPRING HAY-FEVER

Pollen	Positive	Negative
June grass	11	3
Red-top	12	2
Orchard grass	9	5
Timothy	10	4
Rose	2	12
Clover	5	9
Daisy	1	13

satisfactory work was done with the fall cases by the five pollen proteins listed in Table 2.

The tests were made by the cutaneous method, the scratches being kept constantly moist with the pollen protein solutions. Readings of the reactions were taken at the expiration of twenty minutes. The first applications of the pollen protein solutions were well rubbed into the scratches. Since the scratches were kept constantly moist for the twenty minute period, I believe the size of the reactions was larger than if the first applications had been allowed to dry on the scratches before the end of the twenty minute period. Since positive and negative reactions are distinguished by their relative sizes, and since of two pollens belonging to the same botanic family the one giving the larger skin reaction is selected for prophylaxis, it

TABLE 2.—REACTIONS IN TWENTY-FIVE CASES OF UNCOMPLICATED FALL HAY-FEVER

Pollen	Positive	Negative
Ragweed, short	24	1
Ragweed, giant	17	8
Goldenrod	9	16
Daisy	15	10
Corn	2	23

seemed essential to obtain as large diagnostic reactions as possible in order to make the diagnosis and pollen selection for prophylaxis as easy as possible.

SIZE OF DIAGNOSTIC REACTIONS

Reactions less than 3/16 inch in diameter were considered due to trauma, and hence negative. Those from 3/16 to 3/8 inch in diameter were called one plus; from 3/8 to 9/16 inch, two plus; from 9/16 to 3/4 inch (size of dime), three plus; from 3/4 to 7/8 inch (size of five cent piece), four plus, and from 7/8 to 1 inch (size of quarter) or larger, five plus.

From Tables 1, 2 and 3 it will be seen that the chief pollen offenders in the spring were the grasses, whereas the ragweeds and the daisy were the chief offenders in

TABLE 3.—REACTIONS IN EIGHT CASES OF COMBINED SPRING AND FALL HAY-FEVER

Pollen	Positive	Negative
June grass	6	2
Red-top	6	2
Orchard grass	5	3
Timothy	6	2
Rose	0	8
Clover	2	6
Daisy	4	4
Dandelion	1	7
Ragweed, short	8	0
Ragweed, giant	6	2
Goldenrod	2	6
Corn	5	3

the fall. Corn reactions were frequently found in the fall hay-fever cases. These were important in cases of individuals who lived in rural districts or spent the months of August and September in the country. The large size of the corn pollen limits the distance it can be carried by the wind, as noted by Scheppegrell.[1] It is not likely that corn pollen even in the highest winds is blown more than several hundred yards. The limited amount of corn grown in the cities made the corn pollen reaction negligible in persons who spent the months of August and September in the city. Persons who lived in the country districts and showed corn pollen reactions received the benefit of this reaction as a diagnostic factor.

TABLE 4.—SIZE OF REACTIONS IN FORTY-SEVEN CASES OF HAY-FEVER

Pollen	5 Plus	4 Plus	3 Plus	2 Plus	1 Plus
June grass	2	4	8	3	1
Red-top	1	2	4	7	4
Orchard grass	0	4	4	5	2
Timothy	0	3	8	3	2
Clover	0	0	0	3	6
Rose	0	0	0	0	2
Daisy	0	1	5	8	8
Ragweed, short	8	13	4	3	4
Ragweed, tall	0	1	10	11	4
Goldenrod	0	0	2	5	5
Corn	1	1	2	2	3
Dandelion	0	1	0	0	0

June grass, red-top, orchard grass, and timothy all belong to the family of *Gramineae*. In persons reacting to more than one of these grasses, no attempt was made to desensitize with pollen extracts of all the positive grasses, but only with the one which showed the largest diagnostic reaction. A similar botanic grouping occurs in the plants of the fall hay-fever cases. In persons reacting to members of more than one botanic family, an attempt was made to desensitize with the representative member of each family, as determined by cutaneous tests. It is interesting to note, in Table 4, how the size of the reactions varied in the forty-seven cases studied.

Rose pollen, it is seen, was negligible as a hay-fever factor. Many believed that roses caused their hay-fever, and they often spoke of their spring hay-fever as "rose fever." A negative or small reaction sufficed

* From the Department of Hygiene and Preventive Medicine, Cornell University.

1. Scheppegrell, William: Hey-Fever and Asthma, Philadelphia, Lea and Febiger, 1922, pp. 128 and 159.

to convince them of their error. Goldenrod tests also were superfluous, as the pollen of the goldenrod is sticky, and is not carried by the wind, the plant being insect pollinated. The individual may have had hay-fever if he smelled the goldenrod, but it is more likely that he inhaled some ragweed pollen that had fallen on the goldenrod.

In several cases, I found reactions to the daisy pollen extract alone, and attempts to desensitize with the daisy pollen extract have been effective. Scheppegrell [2] states that daisies "do not cause hay-fever, although a reaction may result in sensitized nostrils by direct contact with the flowers." My patients have not been in direct contact with daisies and have had hay-fever each year until the last, when they received prophylaxis with the daisy pollen extract, with marked benefit. The number of my cases is small, and perhaps their relief was a coincidence, but I am inclined to believe that there is a true daisy pollen hay-fever, occurring without direct contact with the flowers.

HEREDITY IN HAY-FEVER

In my forty-seven cases of hay-fever, 31 per cent. of the patients had immediate relatives who were hay-fever victims.

TABLE 5.—RESULTS OF PROPHYLACTIC STUDY OF FOURTEEN CASES OF UNCOMPLICATED SPRING HAY-FEVER

Pollen Protein Used	Series Completed or Not	Size of Diagnostic Reaction	Percentage of Prophylaxis
1. Red-top	yes	3 plus	75
2. June grass	yes	4 plus	75
3. Clover	yes	2 plus	90
4. June grass and daisy	no	3 plus each	90
5. June grass	no	4 plus	75
6. June grass	no	5 plus	75
7. Timothy	yes	3 plus	75
8. Orchard grass	no	4 plus	50
9. June grass	no	4 plus	75
10. Orchard grass	yes	4 plus	100
11. Orchard grass	no	4 plus	70
12. June grass	no	5 plus	50
13. Red-top	no	4 plus	90
14. Orchard grass	no	2 plus	100

Of Scheppegrell's [3] 1,000 patients, 37 per cent. had immediate relatives who had hay-fever.

The two series agree very well.

PROPORTION OF SPRING AND FALL HAY-FEVER CASES

Scheppegrell's [4] series showed this ratio: 7 per cent. spring; 38 per cent. fall, and 55 per cent. spring and fall combined. These cases covered a wide range of ages.

My series, much smaller in number, and more selected as the patients were, with three exceptions, between the ages of 17 and 25, showed the following ratio: 30 per cent. spring; 53 per cent. fall, and 17 per cent. spring and fall combined.

These figures compare very favorably with Williams' [5] series, which showed a ratio of 25 per cent. spring; 58 per cent. fall, and 16 per. cent. spring and fall combined.

HAY-FEVER

Prophylactic Study.—Hypodermic injections were made at intervals of five days with the specific pollen protein extracts, in dilutions of 1:10,000, 1:5,000, 1:1,000, 1:500 and 1:100. Skin tests of the dilution to be injected were watched for twenty minutes. If any reaction was noted at the site of the test, the previous injection was repeated, in order to prevent any constitutional reaction. The injections were begun approximately seventy-five days before the expected onset of the hay-fever season. The amounts injected were: 1:10,000: 0.1, 0.2, 0.3 c.c.; 1:5,000: 0.2, 0.3, 0.4 c.c.; 1:1,000: 0.2, 0.3, 0.4 c.c.; 1:500: 0.2, 0.3, 0.4 c.c.; 1:100: 1 minim, increased by 1 minim every five days until 5 minims had been given at one time.

TABLE 6.—RESULTS OF PROPHYLACTIC STUDIES OF TWENTY-FIVE CASES OF UNCOMPLICATED FALL HAY-FEVER

Pollen Protein Used	Series Completed or Not	Size of Diagnostic Reaction	Percentage of Prophylaxis
1. Ragweed, short	yes	2 plus	100
2. Ragweed, short	yes	3 plus	85
3. Ragweed, short	yes	5 plus	50
4. Ragweed, short	yes	5 plus	50
5. Ragweed, giant, and clover	yes	2 plus each	50
6. Ragweed, short	yes	4 plus	60
7. Ragweed, short	yes	5 plus	35
8. Ragweed, short	yes	5 plus	10
9. Ragweed, short, and corn	yes	4 plus and 2 plus	50
10. Ragweed, short	no	4 plus	50
11. Ragweed, short	no	4 plus	50
12. Ragweed, short	no	5 plus	25
13. Ragweed, short	yes	5 plus	70
14. Ragweed, short	yes	4 plus	80
15. Ragweed, short	yes	4 plus	100
16. Ragweed, short	yes	4 plus	40
17. Ragweed, short	no	5 plus	95
18. Ragweed, short	yes	4 plus	20
19. Ragweed, short	yes	3 plus	50
20. Ragweed, short	yes	4 plus	70
21. Ragweed, short	yes	3 plus	zero
22. Ragweed, short	yes	4 plus	25
23. Ragweed, short	yes	4 plus	80
24. Radweed, short	yes	5 plus	75
25. Ragweed, giant	yes	3 plus	100

This is the first year that I have used the 1:100 dilution. I believe that it has been of distinct benefit. Some individuals were unable to tolerate this strength, as shown by their skin test of it, and had to be content to stop prophylactic measures when they had received the 1:500 dilution.

I have expressed the results obtained in the prophylactic study, by the percentage of hay-fever relief obtained. This percentage is entirely subjective and is the student's estimate of the amount of benefit he derived from the attempted desensitization. This is not an accurate way of determining results of a scientific procedure, yet in hay-fever studies I know of no better way.

TABLE 7.—RESULTS OF PROPHYLACTIC STUDIES IN EIGHT COMBINED SPRING AND FALL HAY-FEVER CASES

Pollen Protein Used	Series Completed or Not	Size of Diagnostic Reaction	Percentage of Prophylaxis
1. Red-top	yes	5 plus	90
Corn	yes	5 plus	90
2. Clover	yes	1 plus	85
Daisy	yes	3 plus	85
3. Timothy	yes	1 plus	90
Ragweed, short	yes	2 plus	50
4. Dandelion and timothy	yes	4 plus and 3 plus	100
Ragweed, short, and corn	no	4 plus and 3 plus	75
5. June grass	yes	2 plus	zero
Ragweed, short	no	3 plus	50
6. June grass	yes	3 plus	70
Ragweed, short, and corn	no	4 plus and 3 plus	zero
7. June grass	yes	3 plus	70
Ragweed, giant	no	2 plus	100
8. Timothy	yes	4 plus	90
Ragweed, short, and corn	yes	2 plus	40

It can be seen that all but three received 75 per cent. or more of benefit, and that these three did not receive the entire prophylactic series of injections.

The results in the fall series were on the whole not as good as in the spring series; which corresponds with the findings of other investigators.

2. Scheppegrell: Hay-Fever and Asthma, p. 90.
3. Scheppegrell: Hay-Fever and Asthma, p. 117.
4. Scheppegrell (Footnote 1, p. 127).
5. Williams, W. C.: Hay-Fever and Its Treatment with Pollen Extracts, Mil. Surgeon, October, 1921.

Summary of Results.—Of my patients, 12.5 per cent. received 100 per cent. relief; 38 per cent., between 75 and 95 per cent. relief; 31 per cent., between 50 and 74 per cent.; 12.5 per cent., between 20 and 49 per cent., and 6 per cent., little or no relief.

Vander Veer's [6] series showed 25 per cent. entirely relieved, 50 per cent. quite comfortable, 15 per cent. slightly relieved and 10 per cent. not helped.

Williams' [5] series of fall hay-fever cases showed 18 per cent. to have 100 per cent. relief; 27 per cent., 80 per cent. relief; 36 per cent., 50 per cent. relief, and 18 per cent., no benefit.

In general, the three series agree very well.

DIAGNOSTIC AND PROPHYLACTIC STUDY OF ASTHMA CASES

True bronchial asthma is caused by sensitization to some of the proteins of pollens, foods, animal epidermis (including hair, feathers, wool and dander) or bacteria, or to any combination of these proteins.

Hence, the study of the asthma cases was more complex than the stndy of the hay-fever cases. The number of pollen protein tests made was the same in the two diseases; but the number of food protein tests that could have been made were almost limitless. Some of the patients reacted to the protein of a food so common as wheat or milk, others to one so infrequently eaten as mustard or buckwheat.

The tests were made in the same manner as those in the hay-fever cases. Reactions with food proteins usually appeared within an hour, but rarely so soon as with pollen proteins.

In this series of seven asthmatics, it seemed easier to remove the offending food from the diet than to try desensitization with the protein of the food.

REPORT OF CASES

CASE 1.—C. gave positive reactions to horse dander, wheat, tomato, pea, cabbage, bean, mustard, pecan, oyster, rice, short ragweed, giant ragweed, goldenrod and daisy. He received the entire prophylactic series of horse dander protein extract. Shortly after completing this series, we visited the artillery stable to see the effect of the prophylaxis. Within ten minutes, he was as asthmatic as ever. In spite of this attempt at desensitization and of his leaving the offending foods out of his diet, no benefit could be noticed. Self-administration of epinephrin keeps him comfortable after an attack appears. Repeated chest examinations by several physicians failed to show any abnormalities other than a slight amount of emphysema. Recently, his sputum has contained tubercle bacilli and a roentgen-ray examination of his chest revealed a tuberculous process.

CASE 2.—W. reacted markedly to mustard, buckwheat, oats, grapefruit and ragweed, short. An amount of mustard undetectable by taste would produce intense asthma when eaten. He wished to be able to eat mustard, but willingly gave up buckwheat pancakes. I fed him ground mustard mixed with sugar of milk in the form of capsules, dividing the daily amount into three equal parts and placing them each in a capsule. The first daily amount was 2 mg., which was increased by 2 or 3 mg. per day. At 170 mg., he developed asthma immediately after taking the noon capsule (containing one third of the 170 mg.). The amount was reduced to 150 mg. per day and kept there for one week. Then the daily amount was increased to 185 mg., without producing any asthma. At this point, he tolerated mayonnaise dressing without ill effect and soon was able to eat sardines put up in mustard. He now eats mustard in ordinary amounts without having asthma.

CASE 3.—M. reacted only to egg yolk. Omission of all forms of foods involving eggs in their cooking or manufacture failed to relieve him. Tonsillectomy gave him some relief from the asthma, as the attacks were less frequent. A correction, surgically, of several nasal abnormalities completely eradicated the asthma attacks. I believe that the surgery cleared up a focus of infection, the bacterial proteins of which were responsible for his asthma, although he failed to give a positive reaction to the skin tests with the common organisms found in the nose or throat of the majority of persons.

CASE 4.—D. had asthma at all times of the year. He reacted only to corn pollen and to dog hair. He had no dog, nor was there one near his home. There were no articles made of dog hair in his home. He refused corn pollen prophylaxis. He was advised to have some much needed nose and throat correction, but this he has failed to do, and his asthma continues. Bacterial proteins failed to react.

CASE 5.—R., a faculty member, has had asthma almost nightly for at least ten years. He reacted to lamb, chicken, and egg white. Removal of these foods from his diet were of no avail. Physical examination revealed no abnormalities bearing on his condition. His habits of living were gone into thoroughly and somewhat revised, without relief of his asthma. An autogenous vaccine was prepared from his sputum raised after an attack. This vaccine consisted of *Streptococcus hemolysans* and *Staphylococcus pyogenes-aureus*, which in Walker's [7] experience gives good results. It failed to give any relief, after being used over a period of three months. A second autogenous vaccine prepared by Walker promises to give some relief. The attacks now occur only twice a week and are shorter in duration. The patient does not raise any sputum after an attack. The series of vaccine injections are only half completed.

CASE 6.—F. had had asthma for years. It was worse in August and September. He reacted to corn (food), coffee, tomato, lettuce and onion, and to both ragweeds. He did not report until August, but received ragweed prophylaxis during August, September and part of October. He had several asthmatic days in August, but has had none since, a new record for him.

CASE 7.—Mc. had asthma throughout the year, and hay-fever in August and September. He reacted to pork, banana and beans. These were omitted from his diet. He also reacted to chicken feathers and horse dander. Removal of his pillows, which contained chicken feathers, relieved him somewhat. He further reacted to both ragweeds and goldenrod and very slightly to daisy and corn pollen proteins. He received prophylaxis with ragweed pollen protein, which gave him 100 per cent. relief from his hay-fever and marked relief from his asthma. He has graduated from the university, but in answer to a letter states that he has had no asthma since September. He attributes the relief to treatment by one of the drugless practitioners whom he has consulted.

SUMMARY OF ASTHMA CASES

One patient was fed mustard and was entirely relieved of mustard asthma. Two patients were entirely relieved of asthma by pollen protein prophylaxis and by the removal of offending foods from their diets. One patient was entirely relieved by surgical correction of the upper respiratory tract. One patient failed to cooperate, and hence could not be helped. In two cases, the treatment was an utter failure, one patient receiving horse dander prophylaxis plus a corrected diet, the other, a corrected diet plus autogenous vaccine. One of these has since shown evidence of tuberculosis, and the other is responding to a second autogenous vaccine.

This series is too small to form a basis for conclusions; yet it is interesting to note that four out of seven patients, or 55 per cent., received entire relief of their asthma by prophylaxis and improved personal hygiene.

6. Vander Veer, Jr. A.: The Present Status of the Treatment of Hay-Fever and Asthma, Am. J. M. Sc. **164**: 97 (July) 1922.

7. Walker, I. C.: Bronchial Asthma, Oxford Medicine **2**: 239.

ECZEMA AND RECURRING URTICARIA

Protein Sensitization.—Fifteen cases of eczema and recurring urticaria were studied through their reactions to food protein extracts. All of these showed cutaneous reactions to the extracts. The majority of the cases showed multiple sensitizations.

A New Cutaneous Reaction to Food Protein Extracts Seen in Eczema Cases.—This reaction occurs at the site of the cutaneous test and shows itself usually within one-half hour. The appearance is as if the upper layer of epidermis had been removed, leaving a reddish abraded appearing surface, which exudes minute droplets of serum. In some ways, it looks like a minute area of weeping eczema. The lesion does not heal for several days and then becomes covered with the characteristic scab of all abraded surfaces.

I have considered this type of reaction positive, because the omission from the diet of foods giving this type of reaction has been followed by improvement in the eczematous condition.

I have not seen mention of this type in the literature of protein desensitization. I. Chandler Walker [8] states that he has also noticed this type of reaction. He considers it as a positive reaction.

Results of Protein Desensitization.—All foods reacting positively were omitted from the diets of the respective patients. Those patients reacting to foods that were very easily abstained from quickly responded and were soon relieved of their eczema. Those who reacted to foods such as wheat, milk and egg, would improve for a short time and then relapse, probably because of some dietary indiscretion. The average college man does not have a very clear conception of dietetics or of the composition of foods. One student who had been told to eliminate eggs in all forms from his diet did not improve and was quite surprised to find that ice cream and cake contained eggs. Some students would rather have the eczema than live on a restricted diet.

I believe that as good results can be obtained in eczema in adults as have been obtained in treatment of this condition in infants and young children, provided the adult will cooperate rigidly and has sufficient knowledge of the composition of foodstuffs so that he can completely eliminate from his diet the offending proteins.

8. Personal communication to the author.

Diet as a Cause of Constipation.—Unbalanced dietary is a cause of constipation. The effect of this condition is seen most often in infants, but its results are often very noticeable in adults as well. It always results in portal congestions, and eventually in colitis.—R. M. Clarke, *California State J. M.* **21**:23 (Jan.) 1923.

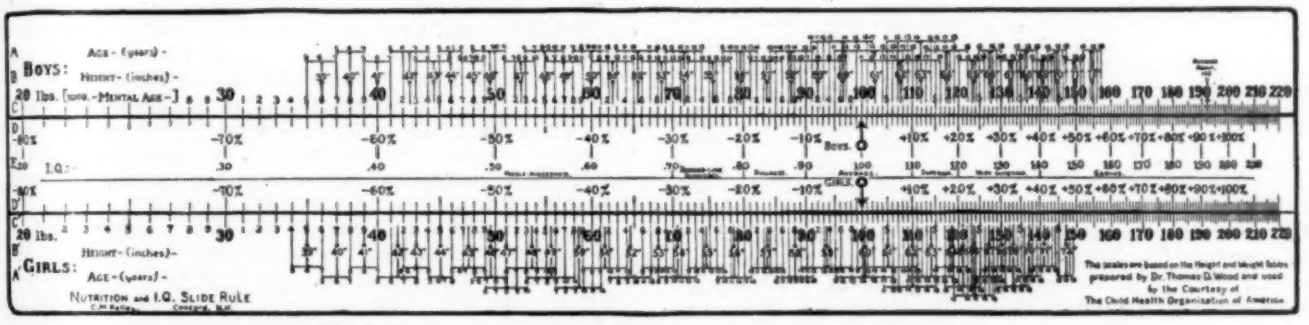
Clinical Notes, Suggestions, and New Instruments

A "NUTRITION" AND INTELLIGENCE QUOTIENT SLIDE RULE

C. M. KELLEY, M.D., CONCORD, N. H.
Medical Inspector, Department of Hygiene, Union School District

This device was designed to simplify the "nutrition" calculations in which deviations from average weights of children are expressed in terms of percentages of such averages. Although the slide rule may seem formidable at first glance, practice with a few examples will disclose the ease and expedition with which such arithmetical problems can be solved, in spite of a multiplicity of factors. It has served as a time saver and as a chart for quick reference during the last two years, and its use has been quickly mastered by clerks and others not accustomed to slide rules.

The data of the design are those of the height and weight tables prepared by Dr. Thomas D. Wood, and the Child Health Organization of America has courteously sanctioned publication in this form. Weights in pounds are represented by a fixed logarithmic scale, with the average weights for respective heights and ages indicated by auxiliary scales. A corresponding logarithmic scale on the slide is graduated to represent



Slide rule for simplification of calculating nutrition and intelligence quotient.

percentages below and above zero. Thus, by setting zero at a given height and age on the fixed scale, i. e., at the average weight, the deviation is read in percentage opposite the actual weight. The standards for boys are represented on the upper part of the slide rule, and the standards for girls on the lower.

The range of the scales lends itself readily to the determination of intelligence quotients by letting the fixed scale represent months, and the scale on the slide, decimals with 1.00 at zero. By setting 1.00 at the chronological age on the fixed scale, the intelligence quotient is found opposite the mental age.

The design is submitted for publication on the recommendation of certain authorities on health conservation, not only for use with the present standards but also as a suggestion which may be employed with other data.

METHOD OF FINDING PERCENTAGE OF VARIATIONS IN NUTRITION CALCULATIONS

1. Set the arrow on the slide (Scale D or D′) at the given height (Scale B or B′).
2. Reset the arrow to the given age for that height (Scale A or A′).
3. Opposite the given weight (Scale C or C′), read on the slide (Scale D or D′) the deviation in per cent. from the average weight for height and age.

Use Scales A, B, C, and D for boys and Scales A′, B′, C′, and D′ for girls.

EXAMPLE.—*Find in per cent. the variation from average weight in the case of a boy 59 inches in height and 14 years of age, who weighs 79 pounds.*

1. Set the arrow (Scale D) at 59 inches (Scale B).
2. As the age mark, 14, Scale A, for this height is at the same point, no correction for age is necessary.
3. Opposite 79 pounds (Scale C), read on Scale D — 14 per cent., indicating that the boy is 14 per cent. underweight.

NOTE.—Variations within a "zone" between 10 per cent. below and 20 per cent. above average weight may be considered satisfactory.

EXAMPLE.—*What is the variation in per cent. from average weight of a girl 51 inches tall and 11 years old, who weighs 82 pounds?*

1. Set the arrow (Scale D) at 46 inches (Scale B).

2. Reset the arrow to the 11-year mark for 51 inches (Scale A'); i. e., at 63 pounds (Scale C').

3. Opposite 82 pounds (Scale C') read + 30 per cent. on Scale D', indicating that the girl is 30 per cent. overweight.

Half pounds may readily be represented in the calculations by taking the reading half way toward the next higher weight mark (Scale C or C'). Half inches in height may be represented by setting the arrow half way between the age mark (Scale A or A') for the whole number of inches in height and the corresponding age mark for the next height.

EXAMPLE.—*A boy, 9 years of age and 46½ inches tall, weighs 45 pounds. Find in per cent. his variation from average weight.*

1. Set the arrow (Scale D) at 46 inches (Scale B).

2. Reset the arrow to 9 years for 46 inches (Scale A), i. e., at 51 pounds (Scale C); and again advance the arrow half way toward the 9-year mark for 47 inches, i. e., at 52 pounds (Scale C).

3. Opposite 45 pounds, the actual weight (Scale C), read on Scale D — 13 per cent.

INTELLIGENCE QUOTIENTS

Let Scale C represent months of age; and Scale E (on the slide), intelligence quotients. Set the arrow (Scale D) at the chronological age in months (Scale C); and opposite the mental age in months (Scale C), read the intelligence quotient on Scale E.

EXAMPLE.—*The mental age of a child 8 years, 7 months (103 months) old is found to be 82 months. Find the intelligence quotient.*

Set the arrow (Scale D) at 103 months (Scale C), the chronological age.

Opposite 82 months (Scale C), the mental age, read 0.79 on Scale E.

THE RUBIN TUBAL INSUFFLATION TEST IN PRIMARY STERILITY *

MURRAY L. BRANDT, M.D., NEW YORK

The tubal insufflation test was performed in a series of fifty-five patients, average age 27 years and average duration of marriage four years, who had never been pregnant. In most cases, the test was repeated several times. Twenty-eight were positive, i. e., the tubes were patent, and twenty-two negative. In five cases that were negative at the first test, patency was demonstrated in subsequent tests. In other words, 40 per cent. of the primary sterility cases showed closed tubes that were an absolute bar to conception.

In twenty-four of the thirty-three cases in which the tubes were patent or became patent, the semen was examined. In sixteen, there were numerous actively motile, well-formed spermatozoa; while in eight, there were either no spermatozoa or a very few nonmotiie bodies.

The insufflation test is made according to the original Rubin technic. Carbon dioxid gas is employed because it is quickly absorbed; and with this gas we do not have any cases of prolonged shoulder pain resulting from the presence of gas intraperitoneally. Fluoroscopy must be done soon after the test; otherwise, the gas will be absorbed and will not be seen even if a roentgenogram is taken.

In the cases in which the tubes were patent, the average pressure before the gas passed through the tubes was 110 millimeters of mercury. In some, the gas passed through at a pressure as low as 50, while in others it passed through at 140 and even 160. In these cases, we allow three excursions in the siphon-meter, equal to 100 c.c., to pass into the peritoneal cavity. The patients invariably complain of typical shoulder pain either immediately on rising from the examining table or within a short time, after walking around. It is a positive diagnostic sign to see the patient put a hand to the right shoulder as she sits up on the table ofter the test is completed.

In those cases in which the pressure rises to 140 or 160, and then drops, there is almost always lower abdominal pain on one or both sides, lasting for a minute or two, while the patient is still in the dorsal position. It seems that in these cases the pressure has been sufficient either to blow out viscid secretions or to straighten out kinks of the tube, or possibly also to overcome some fine velamentous adhesions at the fimbriated end of the tube. In subsequent tests in these cases, the pressure does not rise as high as on the first test.

In twenty-eight cases in which the tubes were patent at the first test, the gynecologic examination revealed: in three, negative findings; in nine, acute anteflexion of the uterus; in seven, retroversion; in six, enlarged ovaries; in one, infantile uterus; in one, parametritis, and in one, endocervicitis.

In five cases in which the tubes were not patent at the first test, they later became patent. One of these patients had considerable lower abdominal pain accompanying two tests resulting in nonpatency. At the third test, the pressure rose to 120 and dropped to 80. The passing of the gas through the tubes was unattended by lower abdominal pain, but was followed by typical shoulder pain, an indication that patency was established.

These five cases indicate that insufflation of the tube may be used as a therapeutic agent in some cases. Apparently, there was a definite occlusion of the fallopian tubes. The high pressure, 200 mm., must have caused considerable distention of the tubes, possibly stretching adhesions and straightening out tortuous tubes. It will be interesting to follow up these cases to see whether any of the patients become pregnant.

Of the twenty-two cases in which the test was negative, there were ten in which the gynecologic examination did not show any gross pathologic lesion to account for the closure of the tubes.

In six cases in which operation was performed, the tubes proved to be nonpatent. The operations were: (1) removal of the left diseased adnexa; (2) trachelorrhaphy and ventrosuspension of the uterus; (3) removal of one tube; (4) Dudley operation and ventrosuspension of the uterus; (5) appendectomy and ventrosuspension, and (6) appendectomy.

Of ten patients on whom dilatation and curettage were performed for the relief of sterility, two had closed tubes, and in two in whom the tubes were closed at first, they later became patent.

It is interesting to note that, in one case, severe abdominal pain followed the insufflation test, which was made on the last day of menstruation, requiring a three days' stay in bed.

Another interesting case was that of a woman in whom, on insufflation, the pressure rose to 140, dropping to 60 mm. She had very severe abdominal pain and was in bed for two days. She returned three months later, not having menstruated since the test. It was found that she was three months pregnant.

In one case of thickened tubes, in which the pressure rose to 160, dropping to 140, the patient had severe pain in the left iliac region, as well as typical shoulder pain. One week later, the patient had a tender mass, the size of a lime, in the right adnexal region, which gradually subsided. There were no other untoward results in this series, although in many instances we allowed the pressure to rise to 220.

CONCLUSIONS

In 40 per cent. of fifty-five cases of primary sterility in which examination was made by the tubal patency test, the fallopian tubes were closed.

In 60 per cent. of these cases, the tubes were patent. In twenty-four of these thirty-three cases, the semen was examined. Sixteen of the specimens were satisfactory, indicating male potency; in the remaining eight, there was either oligonecrospermia or azospermia, i. e., the husband contributed 20 per cent. of the cause of sterility.

Carbon dioxid is the gas of choice in tubal insufflation.

Negative gynecologic examination does not rule out possible closure of the tubes.

Tubal insufflation resulting in demonstrating nonpatency must be repeated three times before it is stated that the patient cannot conceive.

Operations on the genital organs for the relief of sterility are not justifiable without a preliminary tubal patency test.

Tubal insufflation may be a therapeutic agent in some cases of sterility, by making closed tubes patent.

Tubal insufflation should not be done just before, during or soon after the menstrual period.

161 West Eighty-Sixth Street.

---

* From the Gynecologic Clinic of Mount Sinai Hospital.
* Read before the Bronx County Medical Society, Nov. 15, 1922.

INTRAVENOUS NEEDLE WITH VACUUM CUP

HENRY W. ABELMANN, M.D., CHICAGO

This instrument is useful for the administration of intravenous medication, such as arsphenamin, for taking blood for various tests, and for blood transfusion or bloodletting, for which the needle was originally devised. The chief and unique feature of the needle is the vacuum cup, which possesses the distinct advantage of absolutely fixing the needle and holding it firmly in place after its introduction into the vein. Every physician who does intravenous work will at once appreciate this feature, as it eliminates the trouble of the needle's slipping out of the vein or becoming dislodged during the operation.

Other important advantages aside from fixation are that:

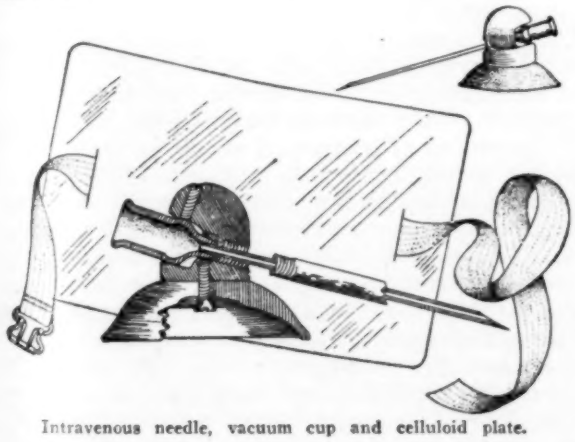
The needle is economical to use, being so constructed that the holder will accommodate any size gage Luer needle. The operator can, therefore, interchange needles easily or replace the old, worn-out needle with a new one.

The needle can be used with any apparatus, thus adding to convenience and economy.

The needle is extremely simple in design, and is easily kept clean and sterilized.

The holder of the needle insures firmness of grasp and precision in manipulation.

Connections can be made with tube or syringe without contamination.



Intravenous needle, vacuum cup and celluloid plate.

The posterior wall of the vein is held down by the combined action of the vacuum cup and the angle at which the needle is placed in the holder. This is of importance because the opening at the needle's end is not so likely to become occluded by the anterior vein wall which is drawn in by aspiration of blood, as is frequently the case with the employment of other needles.

The needle is protected with a sheath so that it can be handled rather carelessly when not in service without fear of dulling the point or contaminating the needle or rubbing off the anticoagulant ointment (citrate ointment) with which I coat the needle. The celluloid plate shown in the illustration makes it possible to apply the vacuum cup needle to any arm.

6152 Kenmore Avenue.

ETHER INTRAMUSCULARLY FOR THE RELIEF OF HICCUP

CHARLES L. GIBSON, M.D., NEW YORK

For the last two years, all cases of hiccup coming under my observation, more particularly after operation, have been treated by the intramuscular injection of 25 or 30 minims of ether. Dr. Allen M. Thomas of New York called my attention to its use in children for stopping the paroxysms of whooping cough, and it occurred to him that it might likewise be useful in the paroxysm of hiccup. If the original dose is not immediately successful, it is repeated one or more times at several hours' interval. Its administration is not painful, and has never been attended with unpleasant circumstances.

The first patient on whom I tried it was an elderly and feeble man who, shortly after a gastro-enterostomy for pyloric stenosis, developed hiccup of moderate severity but of great persistency. The other time-honored remedies had no effect. After the first administration of ether, the hiccups diminished in severity and frequency; the second caused them almost to disappear, and the third was followed by complete cessation.

The method was reported at a meeting of the Practitioners' Society, and from time to time members have reported to me their use of it, with a certain amount of success. It has been successful in probably a third of all the cases in which it has been tried. In some instances, relief after the first administration is almost dramatic, the hiccup stopping at once, without recurrence. The remedy is bound to fail in conditions presenting a definite organic condition, such as intestinal obstruction, uremia and exudate under the diaphragm.

I am aware that the number of remedies for hiccup is numbered by the hundreds, and while it is acknowledged that this is not a cure-all, it certainly is more often successful than anything that I have ever tried.

72 East Fifty-Fourth Street.

ATYPICAL SURGICAL MASTOIDITIS: REPORT OF A CASE

J. L. JOHNSON, M.D., PRESQUE ISLE, MAINE

That surgical mastoiditis may be a grave menace, without any syndrome that would be apparent to a casual examiner, was recently shown by Phillips and Friesner.[1] My impression is that this is more apt to be found typically in adults than in children. The case here reported is, I feel, fairly representative of this condition. Also it is especially interesting from the standpoint of the duration of the process, which by history was three, and to my own observation two months.

REPORT OF CASE

R. J., aged 68, a farmer, seen first, Sept. 9, 1922, complained of deafness in the right ear. One month before he had experienced a sharp, sudden pain in the ear. The canal was washed with warm water, whereupon the pain ceased; but the patient had been deaf in the ear since that time. There had never since been any pain. There had never been any discharge. The patient had no ill feeling of any kind. He had never had any previous trouble with the ear.

Examination revealed a normal canal. There was no drooping of the posterior wall. The drum was very red, and all the landmarks were obliterated. There was no tenderness over the mastoid region or any other part of the head. The temperature and pulse were normal. A myringotomy was advised, but I did not see the patient again until November 10. He still complained only of deafness; his condition had remained unchanged so far as he could tell, except that, the day before, he had developed a slight headache over the right parietal area, and during the preceding few hours he had had a slight feeling of malaise.

The appearance of the canal and of the drum was unchanged. There was a slight amount of tenderness to hard pressure over the antrum. The temperature was 100 and the pulse 104. The patient could hear a conversational voice at 3 feet; bone conduction was increased; on the Weber test the sound was referred to the right.

I sent the patient immediately to the hospital, where roentgen-ray examination revealed a medium sized, clear, pneumatic left mastoid. The right was smaller, very dense and typical of sclerotic bone, except for one large cell continuous with the antrum and extending to the knee of the sinus. This cell was not clear.

Operation revealed a dense, sclerotic mastoid except for the large cell that showed on roentgenoscopy. This cell was filled with granulations and about two drops of free

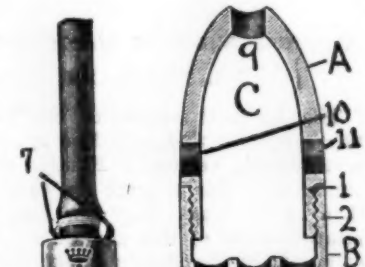
1. Phillips, W. C., and Friesner, Isidore: Report of Five Cases of Mastoiditis with Atypical Symptoms, J. A. M. A. 78:1796 (June 10) 1922.

pus. The bottom of this cell, however, held what appeared like a partly broken down blood clot. This clot rested on the sinus wall, which, at the knee, was entirely bare over a space about 5 mm. square. The sinus itself appeared normal and filled readily from either end, so I contented myself with a simple mastoid operation. The recovery was rapid and uneventful. The patient now hears a low whisper at 15 feet.

A NEW DUODENAL TUBE AND TIP

N. PHILIP NORMAN, M.D., NEW YORK

Einhorn, Jutte, Rehfuss, Lyon, Palefski, Kohn and Buckstein are names that are associated with apparatus designed for duodenal intubation and drainage. The Einhorn tip is a small, olive-shaped, fenestrated piece of metal. The Jutte tube has a blind tip with the fenestrations in the body of the tube. The Rehfuss tip is a large, olive-shaped tip, with slits leading to the center of the tip and then to the tube. The Lyon tip is pear-shaped, with slits, much the same as the Rehfuss tip. The Palefski tip is globular, with fenestrations through the body of the tip. The Kohn tube has small rubber bags attached, one at the tip and another in an intermediary position on the tube so as to sequestrate a certain portion of the small intestine when the bags are inflated. The Buckstein tube and bucket is simply a Jutte tube to which a bucket is attached by a piece of catgut or silk thread.



Duodenal tip in outward appearance and in section.

There seems to be a widespread interest in duodenal intubation because of its diagnostic and therapeutic possibilities. The efficacy of the procedure is dependent in large measure on the apparatus used. The number of devices on the market suggests that none of them are mechanically perfect. Study of the technic of duodenal intubation has led to the conclusions that there is need of (1) a tube of larger caliber; (2) a tip mechanically constructed so as to prevent closure of the fenestrations by intestinal peristalsis, and (3) a tip that is easily swallowed.

The construction of the duodenal catheter nozzle here illustrated is such that the fenestrations toward the rear remain open regardless of intestinal peristalsis. The cartridge shape of the tip facilitates the swallowing of a large tip without straining the muscles of deglutition. In practice, this duodenal aspirating apparatus has shortened the time of the duodenal drainages.

The tip, or discharge nozzle, in outward appearance resembles a cartridge. It is a hollow shell comprising two separate portions, *A* and *B*, the portion *A* having a reduced flange, *1*, threaded to take into the complementary threaded sleeve *2*, so that, when the parts are assembled, an interior fluid distributing chamber, *C*, is formed. The nipple, *4*, provides a ready attachment for the catheter, and is of materially smaller diameter than the entire nozzle, the conduit, *5*, of the nipple centrally entering the chamber from the rear, while the nipple is mechanically united with the entire nozzle by a spider, *6*, secured interiorly of the ring-shaped portion, *B*, to provide rearwardly discharging and aspirating fenestrations, *7*, which are protected from accidental closure by secretions or folds of the duodenum by means of the overhanging skirt or flange, *8*. Forward and laterad are discharge and intake means for fluids as provided by the usual forward and lateral fenestrations *9*, *10* and *11* formed in the forward portion, *A*.

265 West Seventy-Second Street.

Special Article

THE CARE AND FEEDING OF INFANTS

(Continued from page 323)

[NOTE.—This is the sixth of a series of articles on the care and feeding of infants. It is addressed to the general practitioner rather than to the pediatric specialist. When completed, the series, somewhat elaborated, will be reprinted in book form.—ED.]

SPECIAL FEEDING RULES

1. Food requirements which have been recommended must of necessity be considered as relative, variations being to a great extent influenced by the physiologic and anatomic developments and to a not inconsiderable extent by the temperature and humidity of the air surrounding the infant and the type of clothes in which it is dressed.

2. Each day the total amount of food as indicated for the individual infant is to be estimated, in order that the required food and water may be properly administered. The number and amount of feedings will of necessity vary, but each must also be estimated for each day.

3. When a number of infants are to be fed by one wetnurse, careful calculation of the day's needs of each infant must be made by the floor nurse for the information of the nurse in charge of the milk supply.

4. Expression of breast milk should be performed at regular intervals, preferably six times a day at four-hour periods day and night. The sixth expression during the night may, however, be omitted if the supply is in excess. It is only by regular and complete emptying of the breasts by expression that a milk supply can be maintained for an indefinite period, unless there is a second baby which can be placed at the breast.

5. Human, as well as cow's milk, must be obtained under aseptic conditions and kept clean and cool until feeding time. To preserve milk properly, the icebox must register less than 50 F. The food should be slowly warmed before feeding.

6. The amount of water to be fed must be carefully calculated, and it must represent the difference between the total fluids indicated, which will usually average from one eighth to one fifth of the body weight of the infant for twenty-four hours and the amount of fluid given as milk. *The water for each day should be measured and set aside in an individual stoppered bottle each morning.*

It should be administered between the milk meals; or, occasionally, there may be an indication for diluting the milk with part of it. In order to administer the full day's water supply in some of the small infants and those who vomit, it may be necessary to give water in small quantities one, two and even three times between milk feedings. If the infant is unable to swallow properly, water must be given by catheter. In larger infants only a few water feedings a day may be needed, and usually by the second or third week, one seventh or one fifth of the body weight in milk can be fed daily. At this time the water may be discontinued unless it is necessary to supply external heat of considerable degree, or the infant has a fever, both of which necessitate increased amount of fluids.

FEEDINGS AFTER THE TWENTY-FIRST DAY

Usually by the twenty-first day, the food requirements of the infant are quite well established, and a

careful observation of the infant's weight, stools, disposition and, equally important, its body temperature will decide the future requirements.

The water requirement will to a great extent be dependent on the supply of artificial heat and the presence of fever. Ordinarily by the beginning of the fourth week, from one seventh to one fifth (140 to 200 c.c., or from 100 to 140 calories per kilogram) of the infant's body weight in the form of breast milk is needed to maintain proper growth. Rarely is it necessary to exceed these amounts, even in the poorly nourished premature infant. If the physiologic functions are seemingly normal, *the scale* is the deciding factor in indicating food increases or decreases.

As the infant takes on weight and becomes fat with a rounding of the features and the body, as is the case in premature infants successfully fed with breast milk, the total milk administration can be held at one sixth and not infrequently one seventh of the body weight, and normal weight increases may still be maintained.

MIXED FEEDING

When human milk, even though in small quantities, is available, it should form the basis of the diet, and cow's milk mixtures should be supplemental.

ARTIFICIAL FEEDING OF PREMATURE INFANTS

A much higher mortality is to be expected when cow's milk replaces human milk in the feeding of premature infants.

When it becomes necessary to resort to artificial feeding, the quality of the cow's milk and other ingredients, the preparation of the mixture, and the quantity to be administered must all be given careful consideration.

Many different diets, such as simple milk dilutions, cream and skim milk mixtures, skim and buttermilk mixtures, malt soup preparations, condensed milk and evaporated milk, have been suggested. With each food, results are in large part dependent on the physician's knowledge of the results that should follow its use.

Ordinary milk, water and sugar mixtures are not well taken unless, by boiling or alkalizing the mixture, it is so modified that the curd becomes finely subdivided. Our best results have been obtained by the use of low fat and moderately high protein and carbohydrate mixtures.

A boiled buttermilk or skim milk mixture [13] to which dextrinized flour and cane sugar are added may be used to advantage. For use during the first weeks it may be prepared according to the formula given in Table 2.

TABLE 2.—MIXTURE FOR USE DURING THE FIRST WEEKS

Buttermilk or skim milk	1,000
Flour (dextrinized)	10
Sugar (cane)	40

The foregoing formula provides for 16 calories for each ounce, or 540 per liter.

13. The buttermilk and skim milk mixture is thus prepared: To a few tablespoonfuls of buttermilk or skim milk, 2½ level tablespoonfuls of dextrinized flour is added to make a paste. This is made up to 1 liter with buttermilk. (1) The whole is brought to a boil, and withdrawn from the fire. (2) It is brought to a boil again, and withdrawn from the fire a second time. (3) Four level tablespoonfuls of cane sugar is added and the mixture is brought to a boil for the third time. This process should take about twenty minutes. The mixture should be stirred constantly with an egg beater while over the flame. It is made up to 1 liter with boiled water, if the quantity has boiled away to a less amount. It is then put on ice. It is well to start with one-half the amount of sugar and increase as indicated, in the presence of loose stools. Maltose dextrin preparations may be used to replace the cane sugar.

For later use it may be prepared as in Table 3.

TABLE 3.—MIXTURE FOR LATER USE

Buttermilk or skim milk	1,000
Flour (dextrinized)	15
Sugar (cane)	60

This formula provides for twenty calories per ounce or 700 per liter.

All of the rules suggested for feeding with human milk must be rigidly observed both as to quantity and to frequency of feeding. In many instances it will be necessary to increase the diet even more slowly than suggested, and the infants must be carefully observed for evidence of overfeeding. It should also be evident that there is always great danger of underfeeding these infants when on an artificial diet. As soon as the infant's condition warrants the fat-free diet, buttermilk or milk is to be replaced in part by whole milk, or small quantities of cream should be added.

Cream can be added to the foregoing mixtures as indicated in Table 4.

TABLE 4.—FORMULA WITH CREAM

Buttermilk or skim milk	950
Cream, 16 per cent	50
Flour (dextrinized)	15
Sugar (cane)	60

Whenever it is possible to obtain even small quantities of human milk, the artificial food should be used only to supplement the breast milk.

Other Dietetic Requirements.—To counteract the effects of boiling, orange juice feeding should be instituted by the third week, beginning with 0.5 c.c. (8 drops) and increasing from 2 to 4 c.c. (from ½ to 1 dram) daily by the eighth week, in order to avoid scurvy. Cod liver oil as an antirachitic should be fed by the fourth week, beginning with 0.5 c.c. (8 drops) daily, divided into two feedings and increased to 2 c.c. (30 drops) daily by the eighth week. It may be mixed with the orange juice. To counteract the low iron content of these diets, ferrous carbonate, 0.03 gm. (½ grain), or iron and ammonium citrate, 0.03 gm. (½ grain), once daily should be started by the fourth week. The latter may be prescribed in solution.

(To be continued)

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

THEOPHYLLIN SODIO-ACETATE (See New and Nonofficial Remedies, 1922, p. 357).

Theocin Sodium Acetate.—A brand of theophyllin sodio-acetate-N. N. R.

Manufactured by the Bayer Co., Inc., Rensselaer, N. Y. (Winthrop Chemical Co., New York, distributor). U. S. patent 716,994 (issued Dec. 30, 1902; expired). U. S. trademark 39,135.

A Fairer World Possible.—We have available knowledge and ingenuity and material resources to make a far fairer world than that in which we find ourselves.—Robinson: The Mind in the Making.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET - - - CHICAGO, ILL.

Cable Address - - - - "Medic, Chicago"

Subscription price - - - - - - Six dollars per annum in advance

Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Such notice should mention all journals received from this office. Important information regarding contributions will be found on second advertising page following reading matter.

SATURDAY, FEBRUARY 10, 1923

HYGEIA: ARE YOU FOR IT?

Next month there will appear on the news stands the first number of the medical magazine for the people—*Hygeia: A Journal of Individual and Community Health*. This journal will be a departure in scope, in character and in make-up from any periodical on health heretofore published. It will not be a "public health" journal—that is, one to appeal to workers in public health; it will be a popular medical magazine. It will not make a special appeal to the intelligentsia or to the scientist, nor will it be a journal to attract the uneducated. It will be a periodical, however, that will make an appeal to the average intelligent layman—the man and woman on the street. And while it is not to be published for the physician, it will, we believe, contain much that will interest him and, occasionally, something that he will find instructive. In any event, whether or not he himself needs it, it will be a periodical that should be on the doctor's reception room table. A special introductory offer to physicians has been appearing in the advertising pages of THE JOURNAL for the last six weeks. The responses are encouraging, but this periodical should have the support of the entire medical profession if, in its introduction to the public, it is to be an immediate success. While it might be introduced through the ordinary channels—and these channels will be utilized—it is surely the duty of the medical profession to support this enterprise. In asking physicians' support, we do not ask for a sacrifice: the actual cost of production of this journal to the Association will be far greater than the introductory price at which it is being offered to them. The periodical will be profusely illustrated and will be printed on coated paper throughout. As it will be issued and offered to the public about the end of the first week or ten days in March, this special offer will terminate on March 1. After that date the regular price will prevail. See advertising page 17, this issue.

THE HISTOLOGIC BACKGROUND OF BRONCHIAL ASTHMA

The foremost symptom of bronchial asthma and the one that most clearly characterizes it is the paroxysmal dyspnea associated with a disturbance of the bronchioles. The offending stenosis of these respiratory channels may come about in several ways: There may be obstruction caused by secretion from the bronchial glands, swelling and exudation of the bronchial mucosa, or spasm of the bronchial smooth muscular tissue. Since the suggestion has been made that asthma is a manifestation of anaphylaxis, which is characterized in certain species by bronchiospasm, the latter possibility has received a prominence in most considerations of the subject which it never had before. However important hypersusceptibility to protein may be in the causation of asthma, the thesis that anaphylaxis will explain every case can scarcely be defended at the present time.

Recently, Huber and Koessler [1] of the University of Chicago have focused attention on other phenomena than the respiratory crisis of asthma by attempting to determine what morphologic background may be associated with the disease. To the few microscopic studies heretofore actually recorded for cases of true bronchial asthma, they have added further histologic observations destined to elucidate the problem of causation to a considerable extent. It appears from their examination of the finer structure of the bronchi that there is a certain parallelism between the clinical picture and the structural changes seen at necropsy. When there was abundant secretion or bronchorrhea, the anatomic picture presented a striking hypertrophy of the mucous gland system of the bronchi. When there was an "unproductive" cough leading to the attacks of bronchospasm, the chief pathologic change was hypertrophy of the smooth muscular system and atrophy of the mucous gland.

The outstanding feature of these studies is the evidence that the actual thickness of the walls of bronchi and of bronchioli of more than 0.2 mm. outside diameter is increased, as compared with similar structures in nonasthmatic persons. This difference, according to Huber and Koessler, is due to increased thickness of all layers from the epithelium to the outer fibrocartilaginous layer. Hyperemia and cellular infiltration of the wall, and increased activity of the glands, lead to swelling and thickening; and this can produce, mechanically, as well as chemically, irritation of the peripheral nerve endings in the tube, which may indirectly cause bronchospasm. The abundant secretion of the epithelium and the hyperactive glands obstruct, in some instances completely, the already narrowed lumen of the middle-sized and small bronchi and the bronchioli. In this way the Chicago pathologists conclude that both systems, the exudative and the bronchomus-

1. Huber, H. L., and Koessler, K. K.: The Pathology of Bronchial Asthma, Arch. Int. Med. **30**: 689 (Dec.) 1922.

cular, act simultaneously in the production of the stenosis, in some cases one more than the other, but always both to some extent. The anatomic substratum of the bronchospasm, however, is furnished mainly by the hypertrophy of the smooth muscle fiber system.

ANNOUNCEMENTS ON THE CAUSE OF EPIDEMIC INFLUENZA

Newspapers throughout the United States have carried announcements of the discovery at the Rockefeller Institute of an organism, called *Bacterium pneumosintes*, which it was stated had been shown to be the causative agent of epidemic influenza. The announcement received first page attention in newspapers and the omniscient Arthur Brisbane burst forth in the Hearst papers with a full column Sunday editorial lauding the achievement and calling attention to the significance of the fact that this most recent and possibly greatest of medical discoveries had been broadcast by radio, the most marvelous of recent inventions. THE JOURNAL telegraphed to Dr. Simon Flexner, director of the Rockefeller Institute asking for the facts. Dr. Flexner replied: "The article prepared for the New York State Department of Health consisted of a routine summary of papers by Olitsky and Gates on influenza, published in the *Journal of Experimental Medicine* over the past three years and it was headlined by the state publicity department without my knowledge." After the telegram was sent, THE JOURNAL received the regular "Health News Service" issued by the New York State Department of Health. It was dated February 1 and released for newspapers for Saturday, February 3. The headline read: "Cause of Influenza Discovered at Rockefeller Institute, says Dr. Flexner." It then continued:

> In a radio health talk broadcast from Schenectady last night under the auspices of the New York State Department of Health, Dr. Simon N. Flexner, Director of the Rockefeller Institute for Medical Research, announced the discovery of the cause of influenza as the result of researches conducted by members of the staff of the Institute. Dr. Flexner's statement, as prepared at the request of Dr. Hermann M. Biggs, State Commissioner of Health, follows.

The statement referred to is simply a recapitulation of the articles of Drs. Olitsky and Gates which, as he says, were published in the *Journal of Experimental Medicine* and abstracted in THE JOURNAL. The organism concerned has been isolated from the noses and throats of patients with influenza, during the last three years; it has been successfully cultivated on artificial mediums; and when injected into rabbits it has been found to produce influenza-like symptoms. When injected into the trachea it also produces changes in the lung tissues which the observers believe make the lung more susceptible to attack by the bacteria, chiefly streptococci and pneumococci, which regularly inhabit the throats and respiratory tracts of human beings. The work has not, apparently, been confirmed by other observers, and the organism cannot be said to have been conclusively shown to be the cause of the condition known as epidemic influenza; this is particularly the case, since other organisms have, in the belief of their discoverers, produced similar pathologic conditions.

In the present instance, the newspapers are not primarily to blame for having sensationalized the announcement which they received from the radio. All too frequent, however, are statements concerning discoveries in the treatment of such conditions as cancer, tuberculosis, epilepsy and other menacing diseases, which lead thousands of sufferers to false hope, to the unwarranted spending of money and to the ultimate discredit of real advances in medical science. The need of authoritative sources of information for the public on new medical discoveries was never so great as at the present time.

PLEURAL AND PERITONEAL PAINS

Among the symptoms with which a physician is accustomed to deal, few, if any, approach pain in importance. The sensation of pain directly interests the patient. He requires no special training or complicated apparatus to discover it. Imagination may be its cause, Emerson [1] remarks, but the pain thus produced hurts just as truly as pain produced by a real disease. Pain is only a phenomenon of consciousness; but it is always real, Emerson adds, even that felt in a dream.

Clinicians are familiar with so-called "referred" pains which are localized at some distance from the seat of injury, disease, or stimulation of the nervous tissue responsible for the transmission of the sensation. In certain types of heart disease, pain may be referred to the arm; in gallstone colic the sensation may be projected into the shoulder or elsewhere away from the organ directly involved. Such "projection" of pain may easily lead to errors of diagnosis, so that obviously it becomes of the utmost importance to have adequate information about the subject. It is complicated by the fact that in certain of the interior organs the sense of pain seems to be entirely lacking. Pain and pressure or tactile sensations do not always occur simultaneously; they must therefore not be identified or confused.

According to Capps,[2] in man mechanical irritation of that portion of the pleura which covers the lungs does not cause pain. The parietal pleura, on the other hand, is very sensitive to mechanical irritation, and pain is experienced directly over the spot that is irritated. When the diaphragmatic pleura is touched, the localization of the pain varies according to the portion of the diaphragm irritated. If the outer peripheral portion is irritated, the patient experiences pain over the lower thorax, the lumbar region or the abdomen, localities which correspond to the distribution of the lower six intercostal nerves. When the central portion of the diaphragm is irritated, on the other

1. Emerson, C. P.: Essentials of Medicine, Philadelphia, J. B. Lippincott Company, 1920.
2. Capps, J. A.: An Experimental Study of the Pain Sense in the Pleural Membranes, Arch. Int. Med. 8: 717 (Dec.) 1911.

hand, pain is experienced in the neck above the clavicles, a region that corresponds to the distribution of the nerves coming from the third and fourth cervical segments of the cord. Irritation of the pleura which lines the outer pericardium may also cause pain in this region. While irritation of the pleura lining the thoracic wall causes pain in the immediate neighborhood, irritation of the diaphragmatic pleura causes pain at some distance, either below the thorax or in the neck.

The problem of pain in the peritoneal region is, if anything, even more important in the domain of diagnosis. Reference is frequently made to the classic studies of Lennander,[3] who has maintained that the hollow viscera and the omentum give no sensation response to heat, cold or injury; on the other hand, he found that the parietal peritoneum was sensitive to irritation, especially when inflammation was present. This pain sense he explained by the rich supply of cerebrospinal nerves to the parietal peritoneum and its subserosa, in contrast to the sympathetic nerve supply of the insensitive viscera. Capps and Coleman[4] of Chicago have lately investigated further the localization of pain from stimulation of the parietal and diaphragmatic peritoneum, by direct tests with freely movable probes passed through trocars inserted into the peritoneal cavity for drainage in cases of ascites. The parietal peritoneum, as well as that covering the diaphragm, was found to be devoid of pressure sense when objects are gently applied. However, the parietal peritoneum, and its underlying serosa, so far as explored, namely, all the anterior median areas and the lateral areas as far as the anterior superior spines, are sensitive to pain from strong pressure of a smooth point or light pressure or lateral movement of a rough point of wire. The pain elicited by stimulation of the parietal peritoneum is localized with considerable accuracy by the patient, the error being less than an inch. On the other hand, the localization of pain from stimulation of the diaphragmatic peritoneum is never in the diaphragm itself. It is always referred to some distant part. Stimulation of the outer margin causes diffuse pain over the lower costal region and subcostal abdominal wall. Stimulation of the central portion produces pain over a sharply limited point somewhere along the trapezius ridge. These impulses, Capps and Coleman suggest further, are doubtless carried by afferent fibers of the phrenic nerve to the cervical cord, and thence referred to the neck by the sensitized cutaneous nerves of the fourth cervical segment. This pain has not been observed along the course of the phrenic nerve itself. Studies of this sort are not easily conducted, and they require careful control. It seems to be well established now that pain from the parietal peritoneum is always direct and not referred, in contrast to that of the diaphragm.

3. Lennander, K. G.: Mitt. a. d. Grenzgeb. d. Med. u. Chir. **21**: 125, 1910.
4. Capps, J. A., and Coleman, G. H.: Experimental Observations on the Localization of the Pain Sense in the Parietal and Diaphragmatic Peritoneum, Arch. Int. Med. **30**: 778 (Dec.) 1922.

VITAL STATISTICS IN PROGNOSIS

It has been well said that prognosis is the map by means of which the physician leads his patient through the barren land of disease. To the patient, a favorable prognosis affords immeasurable courage and fortitude. Still, such figures as 50 per cent. mortality in cerebrospinal meningitis, leave us, in the face of any one case, in a position suspiciously like that of the gamester who knows only that the next turn of the wheel must be red or black; and we must welcome any basis in addition to the clinical picture on which we may prognosticate. Pearl's[1] recent monograph on the biology of death commends itself for this and other reasons.

The death of an individual results essentially from failure of some one organ system, and Pearl has classified the causes of death on the basis of failure of organ systems rather than pathologic agents. Pneumonia, for example, is considered in terms of (and in company of other causes of) failure of the respiratory system rather than in terms of bacterial invasion. Such classification, to possess prognostic value, must be backed by two premises: first, that the inherent strength or weakness of an organ is more important than the specific pathologic agencies in determining whether and when this organ will break down, and, second, that this strength or weakness is directly inherited. Pearl presents much evidence of the truth of each of these premises.

A comprehensive analysis of death rates reveals that "the probability of any particular organ system breaking down and causing death is mathematically definite at each age, and changes in a strikingly orderly manner as age changes."[2] Thus, for the first year the digestive system, from 1 to 60 years the respiratory, and from 60 to 90 years the circulatory system is most likely to give out and cause death. And, further, the death rates in widely separated environments (as the United States, England and Brazil) are essentially the same. Such constancy in time and percentage of organ failure in essentially inconstant environments strongly suggests some determining factor intrinsic to the organs themselves. This factor is the inherited constitution.

Definite correlation data for each organ system between parent and offspring are not yet available, but the closely related correlation of longevity of parent with that of offspring has been amply demonstrated by Pearson[3] and others, and from their figures it has been concluded that the average duration of life of the persons studied was from 25 to 50 per cent. dependent on environmental factors, and from 75 to 50 per cent. dependent on inherited constitution. This germane comparison will emphasize the importance of the foregoing conclusion.

"If all that medicine and hygiene know today were put into reasonably effective operation, and nobody

1. Pearl, Raymond: The Biology of Death, Philadelphia, J. B. Lippincott Company, 1922.
2. Pearl: The Biology of Death, p. 135.
3. Beeton, M., and Pearson, K.: On the Inheritance of the Duration of Life, and on the Intensity of Natural Selection in Man, Biometrica **1**: 50-89, 1901.

died except when and from such causes as could in no way be influenced by what medical science, good environment, etc., have to offer: by how much *then* would the expectation of life be greater than it now is?" Bell has shown, as regards the factor of heredity, that the expectation of life for a person whose parents died at 80 or over is twenty years longer than that for a person whose parents had died at 60 or under. The answer to the question of environmental importance comes from data gathered by Fisher [4] from "a group of the most prominent medical authorities in this country . . . and . . . tabulated in an extremely conservative manner." "The total increase in expectation of life, if Fisher's ratios of preventability were fully realized, is just under thirteen years! . . . No more striking demonstration could be found of the overwhelming importance of heredity in determining duration of life. For if all the deaths which reason will justify one in supposing preventable on the basis of what is now known were prevented in fact, the resulting increase in expectation of life falls seven years short of what might reasonably be expected to follow the selection of only one generation of ancestry for longevity." [5]

Nor is the evidence limited to vital statistics. Experimental studies on the fruit fly have shown that longevity is inherited in accordance with the classical mendelian laws, long and short lived strains segregating out in a perfectly regular manner. And, be it noted in passing, fly populations kept entirely free from bacteria had a slightly shorter average life than those exposed freely to the vicissitudes of a normal environment.

It is manifest from the foregoing that knowledge of a person's heredity—the age of his forebears at death and the causes of their deaths—would be of signal value. This has not been unrecognized in the past, but it has surely been underrecognized. As a slight example of what might be done, the 1918 influenza epidemic might be cited.

It has been shown [6] that the death rate from influenza in thirty-four of our largest cities was significantly related to the preexisting death rate from heart diseases and, except for a possible correlation with latitude, with no other of fourteen variables considered. The inference is that those persons with weak hearts died when attacked by influenza; others recovered. Clinical experience of the desirable action of heart stimulants in influenza is in accord with this conclusion. The prognosis in any case would have been simplified if the family records showed the presence of a sturdy or a weak heart.

A final word is necessary concerning such records. For prognosis and treatment as well as for the broader eugenic and sociological uses, carefully gathered and adequate genealogies will be invaluable. It is to ourselves as the ones from whom the raw data are obtained that we and others must look for the accurate information and leadership necessary to exploit this rich material.

4. Fisher, Irving, cited by Forsyth, C. H.: Vital and Monetary Losses to the United States Due to Preventable Deaths, Quart. Pub. Am. Stat. A. **14**: 758-789, 1915.
5. Pearl: The Biology of Death, p. 165.
6. Pearl, Raymond: Influenza Studies, II, Further Data on the Correlation of Explosiveness of Outbreak of the 1918 Epidemic, Pub. Health Rep. **36**: 273-289 (Feb. 18) 1921. The familial tendency of cancer is well known (Slye, Maud: The Inheritability of Spontaneous Tumors of the Liver in Mice, J. Cancer Res. **1**: 503 [Oct.] 1916), and is another case in which adequate ancestral data would be invaluable in prognosis.

Current Comment

THE PATENT OFFICE—A FEDERAL RIP VAN WINKLE

At various times, in season and out of season, THE JOURNAL has protested against the lack of intelligence shown in the administration of the patent law relative to agents, chemical or mechanical, for the alleged cure or relief of human ailments. In an editorial published June 23, 1917, THE JOURNAL said:

> The splendid conception of the framers of our constitution in providing a plan for promoting progress in science and useful arts by granting to inventors for a limited time the exclusive use of their inventions, in exchange for the publication of full knowledge thereof, is being debased. No branch of our government is of greater importance to the progress of the country than the patent office, provided that office is intelligently administered. When the patent office is used, however, for an extension of the nostrum business, founded on the abuse of patent and trade-mark laws, it becomes a menace to the public health. The objects of the patent law are being defeated by the practices of the patent office.

In January, 1918, there was published a report of the Committee on Patent Law Revision of the Council on Pharmacy and Chemistry. This report, in addition to recapitulating the efforts that had been made for years by the American Medical Association to bring about either an amendment of the law governing the issuance of patents on medicinal preparations or a revision of the procedure under which such patents are issued, also detailed briefly some of the cruder examples of patent office inefficiency in the granting of patents for medicaments without thorough and scientific investigation of the claims advanced by the patentee. THE JOURNAL has at various times called attention to the fact that the United States Patent Office has issued patents on medicinal products that could have been patented in practically no other country in the world. The case of acetylsalicylic acid comes to mind as one of the most flagrant instances. No other country, not even the original home of the preparation, would grant a patent either on the product, acetylsalicylic acid, or on the process for making that product; the United States Patent Office granted patents on both. As a result it was impossible for seventeen years for any one else to manufacture or sell acetylsalicylic acid in the United States and we had to pay more than ten times as much for aspirin as did the medical profession or the public in practically any other civilized country. The propaganda department of this issue details another flagrant case of unintelligent action on the part of the patent office. It concerns the issuance of a patent for a preposterous mixture of squill root, bitter almonds, nettle and red poppy flowers in olive oil,

providing "a remedy which will prove effective in the treatment of tuberculosis." Isn't it about time that the United States Patent Office realized that this is 1923, that we are living in an age of steam trains, telephones and aeroplanes, and that we no longer travel by stage-coach nor practice the voodooism of the witch doctor or the Indian medicine man? The patent office carries a great power for good or evil—good, when it issues patents for devices or substances which will increase national efficiency, and evil, when it grants patents on things the sale of which must operate against the public health. Both common sense and considerations of the health of the public suggest that the patent office, before it issues patents on medicinal preparations, should consult with and get the cooperation of scientific departments of the United States government conversant with medicines and therapeutics.

BAYER 205

Considerable interest has been aroused by reports of the preparation known as "Bayer 205" which is said to be a specific trypanosomicide. Trypanosome infections are not frequent in man but are common in domestic and other animals. Probably one of the best known examples in man is the so-called African sleeping sickness—trypanosomiasis. This disease does not occur in this country and, as may be unnecessary to say here, must not be confounded with lethargic encephalitis, popularly spoken of as sleeping sickness, with which of course it has nothing in common. African sleeping sickness is transmitted through bites of the tsetse fly and is so fatal to horses and cattle that it has been impossible to raise these animals in districts where the fly is prevalent. The remedy is said to have no effect on organisms other than the trypanosomes, even those which are somewhat nearly related such as the spirochetes and those of kala-azar. It is, however, hinted that there are possibilities for other chemical combinations which may extend the sphere of usefulness. Most of the work so far reported with this remedy has been carried out with small laboratory animals, but some has been done with larger animals, and the successful treatment of two cases of human trypanosomiasis is recorded. It is said that experimentation with man and domestic animals is being actively prosecuted in Africa and that the results with mice and guinea-pigs are striking and full of promise. The chemotherapeutic index for mice is said to be 1:60 while that of atoxyl, which has been extensively used in the treatment of these conditions, is 1:2. Warnings are also given that severe toxic results in the form of hemorrhagic, hemolytic, and toxic nephritis may follow its administration to man. The composition of the preparation is secret. It is reported [1] as a "complex organic combination which contains neither mercury, arsenic, antimony, nor other inorganic agent. It belongs to a new group which presents endless possibilities for variation, and hence hope for further results." "Its composition cannot be given more exactly." A hint as to the chemical composition has been discovered by Barger [2] who found that the Bayer Company had secured patents on the "preparation of carbamides of the naphthalene series which are stated to be trypanosomicidal." It is hoped that, in the near future, the nature and composition of this substance will be declared so that scientists will feel justified in undertaking control, study and investigation. For the present the preparation must be regarded as in the experimental stage and it will be necessary to await further scientific data before judgment can be pronounced as to its efficacy and applicability.

1. Mayer, Martin: The New Trypanosome Remedy "Bayer 205" and Its Significance for Chemotherapeutic Investigation, Deutsch. med. Wchnschr. **48**: 1335 (Oct. 6) 1922.
2. Quoted in Prescriber **16**: 252 (July) 1922.

STRYCHNIN AND DISTURBANCES OF THE VISION

The use of strychnin in the treatment of such conditions as amaurosis, toxic amblyopias, optic neuritis of varying origin, headaches from a variety of disturbances of vision, and retinal anesthesia appears to be extensive. Its use in ophthalmology was introduced by Thomas Shortt [1] of Edinburgh in 1830, who applied it directly to blistered surfaces. Textbooks of therapeutics and ophthalmology have perpetuated and even extended the original ideas of Shortt, the claims running from mere assertions regarding the usefulness of the drug in certain eye conditions to statements that it actually increases the acuity and widening of the field of vision within an hour after injection of therapeutic doses. Occasionally there is a statement to the effect that the good results from strychnin are due to psychic influences; and now, ninety-two years after Shortt, it appears that this opinion is probably correct. This is indicated by the completely negative results of Schlagintweit [2] of the University Eye Clinic at Munich under Hess, who took the trouble to ascertain by means of a variety of ophthalmologic tests and proper controls on man and animals whether the claims of Shortt and the extensive practice of French, English and German ophthalmologists are justified. Schlagintweit found that the hypodermic injection of from 2 to 3 mg. in adults did not increase the field of vision for blue and colorless light, or its sharpness. There were no differences in sensitivity to white and colors. The application of 1 and 3 per cent. concentrations of strychnin nitrate up to a total quantity of 12 mg. to the eyes of persons and young rabbits had no influence on the sensitivity to light and the size of the pupil. The anatomic elements, such as the pigment, of frogs' eyes were unaffected. There seems to be no question that the alleged beneficial effects of strychnin in therapeutic doses on disturbances of vision have no foundation in fact, and that any beneficial results that may be obtained are to be attributed to purely subjective or psychic factors which cannot be readily controlled. Thus, the usefulness of objective data instead of wasteful speculation and carelessness, it is hoped, may be learned once again. But, in view of the simplicity of the tests that can be applied, and the practical nature and easy availability of subjects for testing, in this case, it is difficult to understand why it was necessary to wait ninety-two years before a just and reasonable appreciation of the

1. Shortt, Thomas: Remarks on the Treatment of Amaurosis by Strychnine, with Several Successful Cases, Edinburgh M. & S. J. **2**: 415, 1830.
2. Schlagintweit, E.: Ueber Strychninwirkung auf die Sinne, insbesondere auf das Auge, Arch. f. exper. Path. u. Pharmakol. **95**: 104, 1922.

therapeutic usefulness of strychnin in the treatment of disorders of vision was attained. Other agents in other conditions have had a similar history, and if the truth about newer and less promising agents than strychnin is to be known eventually, why not now? For economic, scientific and humanitarian reasons, the answer is obvious.

Association News

THE ACADEMY OF MEDICINE OF ATLANTA, GA.

For many years the Fulton County Medical Society has cherished the ambition to own a home suitably located and of a dignity befitting its purpose. In spite of the financial difficulties involved, the problem was attacked with enthusiasm and the cooperation of virtually every member of the society was secured. The outcome has been the purchase of a spacious building at 32 Howard Street, which has been remodeled to provide an adequate assembly hall, an attractive library, several committee rooms and a number of smaller rooms suitable for offices or living apartments. The name selected is the Academy of Medicine of Atlanta, Georgia.

Home of the Academy of Medicine of Atlanta, Ga.

The first meeting in this new home was held Dec. 7, 1922, when Dr. J. Shelton Horsley of Richmond, Va., delivered an address on "The Relation of Biology to Medicine." The dedicatory services took place, December 15, when the hall was filled to capacity. Rev. C. W. Daniel, in an eloquent address, dedicated the Academy of Medicine to the advancement of science, and to the development of a fraternal spirit and the upbuilding of morale in the medical profession. The assembly hall has been named in memory of the late Dr. Abner W. Calhoun, and was fittingly dedicated by Lucien L. Knight. The library has been named the John C. Westmoreland library, and was dedicated by Bishop Warren A. Chandler. Dr. Westmoreland was one of the pioneers of medicine in Atlanta, founded the Atlanta Medical College in 1853, and assisted in the organization of the Fulton County Medical Society, which has now grown to be the largest medical organization in the South.

The Fulton County Medical Society is proud of its Academy of Medicine, and realizes fully that its establishment marks but the beginning of effort. The aims of the Academy are "to foster a real bond of union among its members, to stimulate scientific study and to be a real home for the medical profession of Atlanta, of Georgia and of the South." Visitors will be heartily welcome, and every effort will be made to create an atmosphere of real hospitality in addition to that of scientific endeavor.

THE SAN FRANCISCO SESSION

Omission from List of Published Routes

In THE JOURNAL, February 3, appeared a list of routes by which physicians may go to San Francisco to attend the annual session of the Association. The Chicago, Milwaukee and St. Paul Railroad was omitted from this list. This route operates trains from Chicago to Spokane, Seattle and Tacoma, and also the Pacific Limited from Chicago by way of Omaha and Ogden to San Francisco.

Automobile Routes to San Francisco

Many motorists in single cars, small parties and motor caravans from various parts of the United States are already in correspondence with the Local Committee on Arrangements. California is the motorists' paradise. Any part of the state is now easily accessible from anywhere. Nothing could be more delightful than to combine vacation and pleasure by coming from anywhere to the annual session by motor. There are four main transcontinental motor road arteries from Eastern and Midwestern states to California.

The Lincoln Highway alone will be traveled by more than 60,000 cars this year. This is the most direct route from New York and Chicago to San Francisco. It passes through Omaha, Cheyenne, Salt Lake City and Reno.

The National Old Trails route is through Kansas City, Trinidad, Colorado, Albuquerque, N. M., Flagstaff, Ariz., Needles, Los Angeles and San Francisco.

The Yellowstone Trail is from Chicago through Milwaukee, Minneapolis, Aberdeen, across Montana, Idaho, and into Seattle or Portland by way of Spokane or Pendleton, and thence down the west coast into California.

Victory Highway makes good California connections from Denver through Salt Lake City. Salt Lake City is the key position between coast cities and most of the main motor arteries from the Eastern and Midwestern states. From Salt Lake City motorists can turn north through Pocatello, Idaho, Boise and Walla Walla to Portland, and thence south over excellent boulevard roads into California, or one can turn south at Salt Lake and follow the Arrowhead Trail through Provo, Beaver, St. George and Las Vegas to the National Old Trail through Goffs, and into Los Angeles and thence to San Francisco.

There are other good routes leading to the coast and into California. Once in the state of California, the motorist encounters a veritable network of splendid roads leading to all cities and points of interest. Those interested in this method of transportation to the session should write for information or help of any character.

Address communications to Dr. W. E. Musgrave, California Headquarters 1923 American Medical Association Convention, 806-809 Balboa Building, San Francisco.

APPROPRIATION FOR SCIENTIFIC RESEARCH

The Board of Trustees of the American Medical Association has made the usual appropriation to further meritorious research in subjects relating to scientific medicine and of practical interest to the medical profession, which otherwise could not be carried on to completion. Applications for small grants should be sent to the Committee on Scientific Research, American Medical Association, 535 North Dearborn Street, Chicago, before March 15, when action will be taken on the applications at hand.

The Dangerous Constitutional Psychopathic Inferior.—Constitutional psychopathic inferiors should be prevented from engaging in occupations that endanger the lives of themselves and of others, especially in work about trains and in a host of other occupations.—William House, *California State J. M.* **21**:29 (Jan.) 1923.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ALASKA

Alaska Territorial Medical Association.—A letter from Secretary DeVighne states that, owing to the distances and difficulties of transportation, a meeting of the association will not be held until some time next summer. The officers for 1923 are; president, Dr. Joseph H. Romig, Nenana; vice president, Dr. Remaldo V. Ellis, Ketchikan, and secretary-treasurer, Dr. Harry C. DeVighne, Juneau.

ARIZONA

Personal.—Dr. Harry R. Carson, Phoenix, has resumed his practice after a year's illness, following a nephrectomy.——Dr. Harry Felch, Phoenix, has succeeded Dr. Grant S. Monical as health officer of Maricopa County.——Dr. Douglas S. Duncan, formerly in the Indian Service, Fort Defiance, has been appointed to the Indian School Hospital, Phoenix, to succeed the late Dr. Augustus E. Marden.——Dr. Frederick S. Spearman, Rifle, Colo., has been appointed to take charge of the U. S. Indian Service Hospital, Rice.

CALIFORNIA

Personal.—Dr. J. M. McDonald, San Francisco, sailed from New York, January 22, for a round-the-world cruise.——Dr. Edwin J. Riche has been appointed health officer of Watts.—Col. Robert Stanley, medical officer in charge of the U. S. Veterans' Bureau Hospital at San Jose, has been appointed in charge of the new hospital at Tuskegee, Ala. Col Frank E. Leslie of Fort Mackensie, Sheridan, Wyo., will succeed Dr. Stanley.——Dr. Samuel S. Bogle, Santa Rosa, has been appointed county health officer of Sonoma County to succeed Dr. Fred O. Pryor, who resigned recently.

DISTRICT OF COLUMBIA

Bill for Public Health Work.—A bill passed the House, January 8, containing the following appropriations for the District of Columbia:

Instruction of the deaf and dumb at Columbia Institution, $20,250.
Hygiene and sanitation, $32,700.
Health department, $96,390.
Prevention of contagious disease, $69.000.
Medical charities: Freedmen's Hospital, $42,500; Columbia Hospital for Women, $17,000; Children's Hospital, $15,000; Providence Hospital, $15,000; Garfield Memorial Hospital, $15,000; Central Dispensary and Emergency Hospital, $22,000.
Columbia Hospital and Lying-in Asylum, $15,000.
Tuberculosis Hospital, $75,000.
Erection of nurses home at Tuberculosis Hospital, $35,000.
Gallinger Municipal Hospital, $200,000.
Equipment of Psychopathic Buildings, $10,000.

Memorial to Women.—A bill was introduced by Representative Fess, December 29, by which an appropriation of $150,000 is made as part contribution toward a memorial building in the District of Columbia to commemorate the services and sacrifices of the patriotic women of the United States during the World War. The bill stipulates that this memorial shall cost $300,000 and that it shall be used as a permanent model chapter house of the American Red Cross under the charge of the District of Columbia chapter. Another section specifies that the $150,000 given by the government shall not be available until another $150,000 has been raised by private subscription. The bill was referred to the Committee of the Library.

GEORGIA

Personal.—Dr. John B. Fitts, Atlanta, was recently elected secretary of the Southern Gastro-Enterological Association.——Dr. Stewart R. Roberts, Atlanta, has been elected president of the Southern Hospital Association.——Dr. Alice Moses, Atlanta, has been appointed director of child hygiene of Georgia under the state department of health, to succeed Dr. Dorothy Bocker, who resigned recently to return to her home in New York.——Dr. Roger C. Swint has been appointed superintendent of the Georgia State Sanatorium, Milledgeville, to succeed the late Dr. Lodrick M. Jones.——Dr. Conrad E. Keorper, retired lieutenant-colonel, M. C., U. S. Army, has resigned as acting health officer of Savannah.——Dr. Thomas W. Reid, Jr., Thomasville, was recently appointed physician to Thomas County.

ILLINOIS

Physician Convicted of Fraud.—A verdict of guilty was returned by the jury, January 18, in the case of Dr. John G. Massie of Belleville, accused of operating a confidence game in connection with the sale of stock in the defunct Ilgahoma Petroleum & Gasoline Company.

Habits of Typhoid Carriers Regulated.—In an effort to prevent the recurrence of typhoid fever epidemics traced to carriers and, at the same time, avoid the necessity and hardship of quarantining those demonstrated to be carriers, the state department of public health has drawn up a contract which all known carriers of typhoid fever will be required to sign and comply with in order to escape continuous quarantine. The contract simply constitutes a signed agreement to the effect that the carrier will practice the most rigid personal hygiene rules and will not engage in occupations that make the handling or preparation of food necessary. It further requires a semi-annual report from the carrier to the department and a notice to the local health officer of any contemplated change in address. There are about thirty known typhoid fever carriers in the state at present, and eight of these have signed the contract. The others will be given an opportunity to sign as soon as is practical.

Chicago

Institute of Medicine.—At a meeting of the institute, February 9, Dr. F. G. Banting, Toronto, read a paper on "The Value of Insulin in the Treatment of Diabetes"; Prof. J. J. R. McLeod, Toronto, spoke on "The Physiological Functions of Insulin."

Chicago Medical Society.—At a recent meeting of the Chicago Medical Society, Dr. Martin M. Ritter was elected chairman of a propaganda committee organized for the purpose of arranging for the care and treatment of drug addicts at little or no cost to the sufferers. Need for their care in other than penal institutions was brought to the attention of the council of the society. Other members of the propaganda committee are: Drs. George C. Amerson, William S. Bougher, John William Davis, Robert Emmet Keating, Paul E. Kelly and Clarence L. Wheaton.

INDIANA

"Healer" Convicted.—Hubert E. Habig, who claimed that he had the power to heal all diseases, was found guilty of practicing medicine without a license by Judge Mungovan, at Fort Wayne, January 23, and was fined $200 and costs.

Memorial to Physician.—A campaign for funds will be conducted in Lima for the erection of a $500,000 city hospital, which will be dedicated as a monument to the memory of the late Dr. S. B. Hiner, founder and former president of the present Lima City Hospital, it was recently announced by Mr. Rickoff, president of the board of trustees.

KENTUCKY

Reciprocity with South Dakota and Texas.—The state board of health reports that it has completed negotiations for reciprocity with South Dakota, and has concluded an additional agreement with Texas whereby reciprocal relations exist on the basis of either an examination or a diploma.

MAINE

Public Health Association Issues Booklet.—The Maine Public Health Association has issued a booklet, entitled "The Ten Book or How to Keep Well," and the Metropolitan Life Insurance Company has made possible the distribution of 30,000 copies in Maine. The booklet contains ten subjects pertaining to health promotion, and each subject has ten points. The subjects are: the family physician, the public health nurse, social hygiene, mental hygiene, child hygiene, builders of Maine, your body, your eyes, your teeth, cancer and tuberculosis.

MARYLAND

All Physicians as Health Officers.—Letters have been sent to all physicians in Maryland by the state board of health, containing a copy of a law passed at the last session of the legislature conferring on individual physicians the powers of

a county health officer in cases of emergency. This action was taken in view of the present emergency existing in the large number of influenza cases throughout the state.

MASSACHUSETTS

Cutter Lecture.—Dr. Béla Schick, professor of pediatrics, University of Vienna, delivered the Cutter lecture on preventive medicine at the Harvard Medical School, February 8, on "Prevention and Control of Diphtheria."

MICHIGAN

Illegal Practitioner Arrested.—Miss Erma Parks, chiropractor of Hillsdale, was found guilty in the circuit court, January 16, on a charge of practicing medicine without a license.——Peter Kanss, an itinerant practitioner, was arrested recently in Detroit for practicing medicine without being registered. He pleaded guilty and was fined $100.

Physician's Appeal Refused.—Dr. Joseph C. R. Charest, Detroit, formerly of Plummer, Minn., convicted last June in Detroit for practicing medicine without a license, applied to the supreme court for mandamus proceedings to compel the medical board to indorse his Minnesota medical license. His application to the Michigan board had been refused for the reason that the college from which he graduated is not an accredited medical college in Michigan, and also for the reason that he had violated the medical practice act by practicing in the state prior to registration. His application for mandamus was recently vacated and he has returned to Minnesota.

MINNESOTA

Personal.—Dr. Isaac F. Seeley, Northfield, has been appointed city physician to fill the vacancy left by the death of Dr. John G. Philips.——Dr. Albert H. Parks, Minneapolis, chief surgeon at the Minneapolis General Hospital, has been appointed to the board of public welfare, to succeed Dr. Archa E. Wilcox, who resigned recently.——Dr. James Frank Corbett, Minneapolis, and Stanley R. Maxeiner, Minneapolis, were elected president and secretary-treasurer, respectively, of the Northwestern Medical Officers' Association.

Medical Society's Charter Revoked.—A decision in favor of the Minnesota State Medical Association was filed recently in the Ramsey County Court in answer to the suit brought against the state association in regard to the legality of its action in revoking the charter of the Brown-Redwood Medical Society in 1918. The charter was revoked because of the refusal of the society to expel Dr. Louis A. Fritsche of New Ulm, after he had been pronounced guilty of disloyalty by the state public safety commission. The petitioners asked for a writ of mandamus to compel the state association to reinstate the charter, and Judge Catlin's ruling was made in denying the writ.

MISSOURI

Prof. Lefevre Dies.—Prof. George Lefevre, Ph.D., professor of biology at the University of Missouri School of Medicine, Columbia, since 1899, died, January 24, from pneumonia.

NEBRASKA

Personal.—Dr. Charles W. M. Poynter, professor of anatomy, University of Nebraska College of Medicine, Omaha, spoke on "Pre-Indian Anthropology," before the Douglas County Medical Society, January 23.——Dr. A. C. Colman, Chappell, has been elected to the state legislature.——Dr. Lynch is having his private hospital building at Fairbury remodeled at a cost of $25,000.——Dr. Hamilton B. Lowry, Lincoln, has been elected president of the Nebraska State Historical Society.——Dr. Joseph Bixby, Geneva, was injured recently when his automobile collided with a locomotive tender.

Society News.—At a meeting of the Omaha section of the American Chemical Society, December 19, Dr. Charles F. Crowley, Omaha, was elected chairman.——The Interstate Society of Radiology and Physiotherapeutics was organized at Omaha, December 16. Dr. Charles L. Mullins, Broken Bow, was elected president, and Dr. Roland G. Breuer, Lincoln, secretary-treasurer.——The Lancaster County Medical Society gave a farewell dinner in honor of Drs. Ira H. Lockwood and Harold F. Morrison, at Lincoln, January 18. Dr. Lockwood, for several years roentgenologist at Green Gables, has gone to Kansas City, Mo., and Dr. Morrison will locate in Cedar Park, N. Y.

NEW JERSEY

Chiropodist Fined.—The state board of medical examiners reports that Jennie L. R. Hardy was fined $200 for practicing chiropody without a license, recently.

Hospital Additions.—The new addition at St. Barnabas Hospital, Newark, has recently been opened.——Plans are being made for the erection of new additions to St. Michael's Hospital, the Homeopathic Hospital and the Newark Maternity Hospital, all of Newark.

Personal.—Dr. Michael Vinciguerra has been appointed president of the board of health of Elizabeth.——Drs. Albert Cuskaden and Joseph Poland, both of Atlantic City, sailed recently on the White Star liner *Homeric* for Mediterranean ports.——Dr. Alfred Gordon, Philadelphia, addressed the Cumberland County Medical Society at Vineland, January 23.——Dr. H. Frances B. Tyson has been appointed health officer of Englewood.

NEW YORK

Hospital News.—A $100,000 pyschiatric building at Rochester State Hospital is planned for teaching purposes in connection with the new medical school of the University of Rochester.——The U. S. Hospital Fund campaign, January 14-23, to raise funds for the Rochester General, the Highland and the Rochester Homeopathic hospitals, ended three days ahead of time with $1,300,000, exceeding the quota by $37,000.——Henry A. Bowman of Webster has been appointed superintendent of the Monroe County Tuberculosis Sanatorium, Rochester, at a salary of $3,000 a year. Dr. John J. Lloyd will devote his full time to the medical work of the sanatorium as physician-in-chief.

Society Elections.—The Italian Medical Society of Brooklyn elected Dr. Joseph A. Manzella president for 1923, and Dr. John B. D'Albora, secretary.——At the annual meeting of the Metropolitan Medical Society, Dr. S. Philip Goodhart was elected president; Dr. Herman Schwarz, vice president and Dr. Morris Grossman, treasurer.——Dr. Siegfried Block was elected president of the Brooklyn Medical Society; Dr. Benjamin F. Maggio, vice president, and Dr. Adolf Von P. Fardelmann, secretary.——At the annual meeting of the Erie County Medical Society at Buffalo, December 18, Dr. Charles E. Abbott was elected president; Drs. Marshall Clinton and Charles Borzilleri, vice presidents, and Dr. Levi Franklin Anderson, treasurer.——At the thirty-fifth annual meeting of the Associated Physicians of Long Island, January 27, in Brooklyn, the following officers were elected for the ensuing year: president, Dr. Hough Halsey, Southampton; vice presidents, Drs. Herbert Dana Schenck, Brooklyn, Arthur David Jaques, Lynbrook, L. Howard Moss, Richmond Hill, and W. C. Garvin, superintendent of King's Park State Hospital; secretary, Dr. James Cole Hancock, Brooklyn, and treasurer, Dr. Henry C. Courton, Richmond Hill.

Increase in Alcoholism.—Dr. S. Dana Hubbard, director of public health education of the department of health, has recently made public figures showing that, since the last year before the prohibition law went into effect, there has been a constant increase in this city in the number of arrests for drunkenness, the number of deaths due to wood alcohol poisoning and the number of persons admitted to Bellevue and Kings County hospitals suffering from acute alcoholism. The figures show that during the last year 5,624 persons suffering from acute alcoholism were admitted to those two hospitals, as against 3,345 for the preceding year. Likewise the number of deaths from alcoholism nearly doubled last year. For 1922, the deaths numbered 295 as against 141 for 1921. The number of deaths, however, is smaller than it was in the years preceding prohibition. In 1916, for example, 690 persons died in this city from alcoholism. The low mark was reached in 1920 with 127 deaths but since that time there has been a rapid increase. Dr. Hubbard's figures have been verified by those of the police department, which show that 7,866 persons were arrested in this city for drunkenness in 1922, as against 6,233 in 1921. In 1920, the number of arrests was 5,936. Dr. Hubbard's interpretation of the figures is that prohibition has increased the number of immoderate drinkers, and that those who drink have switched from beer to spirits.

New York City

Physician's License Revoked.—The state board of medical examiners reports that the license of Dr. Leopold Harris was revoked following conviction in the federal courts for violation of the Harrison Narcotic Law.

Evening Clinics at the Post-Graduate Hospital.—Evening clinics in gynecology and in diseases of the nose and throat have been established at the Post-Graduate Hospital. These clinics are held on every Wednesday and Friday evening.

Influenza Warning.—The New York City Health Department has issued a warning urging the public to guard against the spread of influenza. The records of the department show that 131 cases of influenza were reported on February 1, making a total of 1,114 cases since January 1. Most of the cases have been mild.

Farewell Dinner to Dr. Copeland.—Friends of Health Commissioner Dr. Royal S. Copeland, United States Senator-Elect, are preparing to give him a farewell dinner at the Hotel Astor, February 12, prior to his leaving for Washington. George Gordon Battle is chairman of the dinner committee and Bainbridge Colby will act as toastmaster.

New Ambulance for Fire Department.—A new ambulance, especially equipped with pulmotors and other appliances required to meet conditions likely to be met with in those engaged in fighting fire, has been presented to the New York Fire Department by honorary Deputy Chief William F. Kenny. The ambulance, which was designed by Dr. William H. White and Dr. H. M. Archer, cost $15,000 and the donor has provided a fund of $25,000 for its maintenance.

Expansion of Academy of Medicine.—In connection with the announcement that the trustees of the New York Academy of Medicine have acquired an option on a site for a new building at Sixtieth Street and Park Avenue, it is announced that on condition that the members of the academy acquire an appropriate site the Rockefeller Foundation will contribute $1,000,000 for the erection of a new building and that the Carnegie Foundation will contribute an endowment fund sufficient to care for the increased needs of its library and the enlarged educational activities that the institution is planning to carry on.

Cornell University Clinic to Establish Health Clinic.—Dr. G. H. Biglow, director of the clinic of the Cornell University Medical College, announces that it is proposed in the near future to establish a health clinic. Patients will fill out a brief questionnaire in advance and receive a thorough physical examination, especial attention being given to defects of posture, diet and exercise. In the questionnaire the name of the family physician is asked and if need of medical attention is found, the patient is referred to his physician and report of the findings is sent to him. The charge for the examination is announced as $5 and the attending physician is expected to give about forty-five minutes to each examination. Physicians in the clinic doing this work are compensated and, when necessary, follow-up visits are made at the regular clinic rates. As was stated in the notice published concerning the report of this clinic for the first year, the average cost per visit was $2.08 while the average cost to the patient was $1.57. It is stated economies within the clinic are being instituted and the question of increasing the fees is under consideration.

NORTH CAROLINA

Marriage License Bill.—A bill has been introduced into the house by Representative Mabry which provides that no officer charged by law with the issuing of marriage licenses shall issue a license to any male applicant, unless the applicant shall first file a certificate of a reputable physician stating that he is free from all venereal disease (the certificate not to date more than ten days prior to the date of application). The certificate of health shall be filed together with the marriage license as part of the record of the marriage. Any false statement made in any such certificate, or any other violation of the act, shall be deemed a misdemeanor and will subject the offender, on conviction, to a fine of not more than $100 or imprisonment of not more than thirty days, the bill further stipulates.

Public Health News.—For the last four years, the state of North Carolina has had a very effective system of medical inspection of schoolchildren, because provision is made through a small appropriation from state funds for treatment of those children found needing attention on account of remediable physical defects, such as diseased tonsils and decayed teeth. Acceptance of the treatment offered by the state is altogether optional on the part of the parent. In his annual report for the year 1922, Dr. G. M. Cooper, director of the division of medical inspection of schools, states that dental clinics were held in thirty-nine counties and 32,382 children received free dental treatment. More than 40,000 teeth were permanently filled. The work has the unqualified support of the North Carolina Dental Society. Tonsil clinics were held in twenty-eight counties, most of them in sections having no hospitals or throat specialists. In these clinics, 2,488 children were successfully operated on by twenty of the leading specialists of the state. The operations were performed in a temporary hospital equipped with the most modern appliances, including twenty-five beds for the overnight care of the little patients. This equipment is, of course, portable.

OHIO

Obstetricians Elect.—At the annual meeting of the Obstetrical Society in Cincinnati, January 11, Dr. Louis Schwab was reelected president and Dr. Franz Miketta, secretary-treasurer.

Gift to Establish Medical Scholarship.—It was announced at the last board meeting of the University of Cincinnati College of Medicine that a gift of $3,000 to establish a medical scholarship in memory of his wife had been donated by Judge Harry M. Hoffheimer. The annual net income is to be awarded yearly to the graduating student who, on a majority vote of the faculty, is selected as first in rank in scholarship.

OKLAHOMA

Personal.—Lieut.-Col. Arthur M. Whaley, M. C., U. S. Army, stationed at Fort Sill, has been awarded the distinguished service medal in recognition of his work in the care and evacuation of the wounded in France.——Drs. Charles L. Reeder, Robert S. Wagner and Francis C. Myers were unanimously elected members of the board of health of Tulsa, January 19.——Dr. Harvey E. Rappolee, Madill, has been appointed health officer of Marshall County to succeed Dr. Thomas A. Blaylock.——Dr. A. E. Davenport, Oklahoma City, has been appointed state health commissioner of Oklahoma to succeed Dr. Arthur R. Lewis.——Dr. Isaac N. Cottle, Oklahoma City, was recently elected health officer of Oklahoma County.——Dr. George E. Hartshorne, Tulsa, has been appointed county health officer to succeed Dr. C. L. Reeder.

PENNSYLVANIA

Society News.—The Mahoning County Medical Society celebrated its fiftieth anniversary, February 1, by holding a joint meeting with the Lawrence County Medical Society at the Youngstown Country Club. Dr. Charles D. Humes, Indiana University, addressed the meeting.

State Health Commissioner Appointed.—Dr. Charles H. Miner, Wilkes-Barre, has been appointed state health commissioner of Pennsylvania to succeed Dr. Edward Martin. He will have the cooperation of Dr. Victor G. Heiser, New York, who recently declined the position because he wished to retain his connection with the Rockefeller Foundation.

Diphtheria Week.—The public relations committee of the state medical society, at a recent meeting in Harrisburg, planned a "Diphtheria Week" in April, when it proposes to enroll local authorities, school, state, church, business, civic and welfare organizations, industry and labor, in an effort to carry the message of diphtheria prevention and cure to every citizen of the state.

State Society Purchases Home.—The Medical Society of the State of Pennsylvania purchased the property at 230 State Street, Harrisburg, January 23, from Dr. Jesse L. Lanker, for $17,000, it is announced. The society will make a number of improvements on the property; and, after April 1, the offices of the *Pennsylvania Medical Journal* and those of Dr. Frederick Van Sickle, executive secretary of the state medical society, will be moved into the building. The name of the journal will be changed to the *Atlantic Medical Journal* (THE JOURNAL, January 27, p. 262), and the Delaware State Medical Society will unite with the Medical Society of the State of Pennsylvania, in its publication.

Philadelphia

New Quarters for Medical Society.—The offices of the Philadelphia County Medical Society have been moved to the Real Estate Trust Building, Philadelphia.

New Building of Methodist Hospital Opened.—The new building of the Methodist Episcopal Hospital, Philadelphia, was formally dedicated, January 1, by Bishop Berry. Dr. Charles M. Boswell, secretary, also gave an address. It is a five-story building, located at the south end of the administration building. It will increase the capacity of the hospital by providing fifty-two cribs in the children's wards; eighty-four beds in private rooms and thirty-two beds in semiprivate rooms. Mr. and Mrs. Keene provided funds for one of the

children's wards by a gift of $20,000 and Mr. and Mrs. Haddon for the other by a gift of like amount. A donation of $5,000 was received as a New Year's gift, and Mrs. Freeman made a gift of $1,000; an anonymous Philadelphian stated that he will donate $70,000, in addition to the $5,000 he has already given, on condition that the entire cost of the building, $400,000, be secured. The amount to the credit of the new building up to the present is $275,000.

RHODE ISLAND

Society News.—Dr. LeRoi G. Crandon, Boston, chief surgeon of the Boston City Hospital, the Chelsea Memorial Hospital and the Home Memorial Hospital of New London, was the principal speaker at the annual meeting of the Washington County Medical Society at Westerly, January 11. Officers elected for 1923 were as follows: president, Dr. John E. Ruisi; vice presidents, Drs. Francis E. Burke and Michael H. Scanlon, and secretary-treasurer, Dr. William A. Hillard.——Dr. Lee W. Dean, dean of the State University of Iowa College of Medicine, Iowa City, gave an address before the eastern section of the American Laryngological, Rhinological and Otological Society at Providence, January 27..

TEXAS

Hospital News.—Three new units have recently been constructed at the Parkland Hospital, Dallas, at a cost of $525,000. These are the pay ward, the contagious ward and a ward for general cases.——A hospital to be known as the Richmond Freeman Hospital will be erected in Dallas by the First Presbyterian Church, at a cost of $45,000. The contract has already been let.——Bids have been called for the first three units of the Herman Hospital, which is to be erected at Dallas at a cost of approximately $700,000.

VERMONT

Personal.—Dr. Donly C. Hawley of the University of Vermont, Burlington, addressed the physicians of the Rutland County Medical and Surgical Society in Burlington, January 9. Dr. Ralph B. Seeley presided.——Dr. William T. Slayton, Morrisville, has resigned as a member of the state board of health.

WEST VIRGINIA

Personal.—Dr. Melville L. Casselberry, Morgantown, celebrated his ninety-second birthday recently. He has been in practice more than seventy years and still continues his office practice.——Drs. R. H. Edmonson and William B. Scherr, Morgantown, were elected president and secretary, respectively, of the Monongalia County Medical Society at the annual meeting. Dr. Luther S. Brock, aged 78, was made a life member of the society.——Dr. Irvin Hardy, Morgantown, has recently returned from attending clinics in Edinburgh, London, Paris and Vienna.——Dr. Alexander C. Abbott, professor of bacteriology and hygiene at the University of Pennsylvania, Philadelphia, addressed the Ohio County Medical Society at Wheeling, January 12. His subject was "Carriers as a Public Health Problem."

WISCONSIN

Wisconsin Surgical Association.—The next annual session of the association will be held in La Crosse, May 9-10. All members of the state medical society are invited to attend.

Hospital News.—The Portage Hospital, Portage, will reopen in April with Dr. W. J. Thomson in charge. He has been in Chicago taking graduate work and acting as locum tenens for Dr. William S. Fisher, who has gone to India.——A $45,000 hospital will be erected at Edgerton in memory of the men who fought in the World War.

CANAL ZONE

Medical Association of the Isthmian Canal Zone.—The annual meeting of the association was held in Ancon, December 15, under the presidency of Dr. Cornelius D. Briscoe, Ancon. The following officers were elected for the ensuing year: president, Major Edgar A. Bocock, superintendent of the Santo Tomas Hospital, Ancon; vice president, Dr. Raymond W. Runyan of the Panama Hospital, Ancon, and secretary-treasurer, Dr. Dillon G. O'Neil of the Corozal Hospital, Corozal. The secretary reports that Dr. Leland S. Chapman has left the Ancon Hospital and will reside in Los Angeles, and that Dr. Louis Wender of the Corozal Hospital has gone to Brooklyn.

CANADA

Campaign Against Latin Prescriptions.—John Charles Buckley, a member of the Alberta Provincial Legislature, has inaugurated a war against Latin names used by physicians and druggists. Mr. Buckley intends to introduce an amendment to the medical act, requiring the medical profession to eliminate "doctors' English" from their prescriptions.

Society News.—The annual meeting of the Canadian Medical Association will be held in Montreal, June 12-14, under the presidency of Dr. David H. Arnott, London, Ont.——The New Brunswick Medical Society will establish a new precedent this year by holding its annual meeting outside the boundaries of the province. In conjunction with the annual meeting of the Maine Medical Association, the New Brunswick organization will hold a combined meeting at Houlton, Maine, June 12-13.——The next annual meeting of the British Columbia Hospital Association will be held at Penticton, August, 1923.

Hospital News.—The Toronto General Hospital operated in 1922 with a deficit of $68,762, exceeding the deficit of the previous year by $4,000. After some discussion, the board of trustees decided to make representations to the special university committee in connection with the controversy now in progress as to the relations between the university medical faculty and the General Hospital.——On condition that the citizens of Montreal raise $150,000, the city of Montreal and the provincial government of Quebec will establish a $1,000,000 tuberculosis hospital in Montreal, with an endowment representing a cash expenditure of nearly $2,000,000. The Mont LaSalle site and building in Maisonneuve, and cash grants, have already been donated by the city.

Personal.—Dr. Edwin J. Rothwell, New Westminster, president of the Fraser Valley Medical Society has resumed office work following a prolonged illness.——Dr. Gordon S. Mundie, Montreal, sailed, January 15, on the *Megantic* for a cruise to South America.——Dr. Linsly R. Williams, director of the National Tuberculosis Association, has accepted an invitation to lecture at McGill University, Montreal, on "Industrial Work from the Standpoint of Tuberculosis." His will be one of a course given during the spring of 1923 on the general subject of industrial medicine.——Dr. T. O. Martin, Montreal, Que., has been appointed inspector of hygiene for that city.——Dr. H. M. Robinson of Victoria, B. C., has been elected president of the Victoria Medical Society.

GENERAL

American Society for Experimental Pathology.—Dr. Eugene L. Opie, St. Louis, was elected president, and Dr. Wade H. Brown, New York, was elected secretary-treasurer, of the American Society for Experimental Pathology, at the annual meeting in Toronto, recently.

Radiology Journal Changes Title.—Commencing with the January issue, the *American Journal of Roentgenology* will be known as the *American Journal of Roentgenology and Radium Therapy;* when founded in 1906 it was called the *American Quarterly of Roentgenology.*

Relief for German Children.—The American Red Cross, in response to urgent representations by the German Red Cross, has sent $5,000 to relieve distress among German children. Reports from various sources indicate that children in Germany are suffering privation this winter owing to the lack of milk and foods essential to their health.

American Society for Pharmacology and Experimental Therapeutics.—At the annual meeting of the society in Toronto, Canada, recently, the following officers were elected for the ensuing year: president, Dr. Charles W. Edmunds, Ann Arbor, Mich.; secretary, Dr. Edgar D. Brown, Minneapolis, and treasurer, Dr. Hugh McGuigan, Chicago.

Public Health Among the Indians.—A bill passed the Senate, January 5, containing an appropriation of $370,000 for hospitals, for medical treatment and for the care and preservation of public health among the Indians. An item of $25,000 for the suppression of liquor and drugs, including peyote, was struck out.

Commission for Greek Relief Named.—The chairman of the American Red Cross has announced the appointment of Lieut.-Col. William N. Haskell as American Red Cross commissioner to Greece and Major Edmund L. Daley as deputy commissioner. The appointment of a commission to Greece was made on request of Dr. A. Ross Hill, vice chairman in charge of foreign operations, who has been in Greece since October, 1922, in charge of the American Red Cross refugee work.

Bill Proposes Parental Court.—A bill was introduced into the House by Senator Brookhart, January 6, which provides that all children under 18 years of age who commit acts in violation of any of the laws of the United States shall be legally designated as infants. They are taken out of the jurisdiction of the regular criminal courts and placed under a U. S. parental court, established by this bill. The court is given power to act as guardian for such offenders and a United States parental guardian is authorized, to be appointed by the President.

National Health Council.—Plans have been completed for the issuance of bi-weekly bulletins on state health legislation during 1923 by the National Health Council. They will be published by the U. S. Public Health Service with the cooperation of the health council, and will be under the direct supervision of Surg. Mark J. White, U. S. Public Health Service, and Drs. D. B. Armstrong and James A. Tobey, Washington, D. C. The bulletins will be distributed without charge to a mailing list limited to 200, including the state health officers, members of the National Health Council and a few others. The first issue appeared January 20.

American Library Association.—It is announced by the association that a book on "The Hospital Library" will be published if a real demand for such a publication is evidenced by advance orders. The book has been edited and in large part written by Edith K. Jones, general secretary, division of public libraries of the department of education, Boston. The material brought together for the book includes chapters on the scope of hospital library service; hospital library organization and administration; book selection; the medical library; serving the children's wards; stories to read aloud, and a list of more than 2,000 books to meet the needs of hospital patients and nurses. The book will be illustrated with photographs of hospital library rooms, equipment and activities.

A Warning.—THE JOURNAL has published several announcements warning physicians against impostors who have been victimizing physicians in various cities by representing themselves as visiting physicians who have been unfortunately robbed and who desire to obtain money for transportation home. This particular method of securing money has been worked in Philadelphia, St. Paul, St. Louis, Chicago, Milwaukee and other cities. A letter has just been received from Dr. Jacques Holinger, Chicago, stating that among recent victims have been Dr. Vilray P. Blair, St. Louis; Dr. Harry Ritchie, St. Paul; Dr. Robert Ivy, Philadelphia, and Dr. G. V. I. Brown, Milwaukee. Physicians should be on the lookout for any one personally unknown to them who desires to borrow money under the name of a physician; it would be desirable to apprehend and cause the arrest of the impostors.

National Industrial Conference Board.—The thirty-sixth annual meeting of the Conference Board of Physicians in Industry was held in New York, January 20, under the presidency of Dr. John J. Moorhead. Among the subjects discussed was that of industrial medical records and roentgenray examinations. In a report submitted on the roentgenray examination of the chests of more than 3,000 employees in one factory, it was stated that, by refinements of technic, it had been possible to make these exposures at the rate of about one per minute. A specially devised caliper was shown for measuring the depth of the chest, thus enabling a more accurate exposure. This study showed that 3.7 per cent. of those examined had positive or suspicious symptoms of pulmonary tuberculosis; 3.2 per cent. presented abnormalities of the heart or aortic arch, and 0.8 per cent. had miscellaneous chest abnormalities; a total of 7.7 per cent. of those examined having some abnormality of the chest.

National Hospital Day Committee.—E. S. Gilmore, superintendent of the Wesley Memorial Hospital, Chicago, has been appointed chairman of the national hospital day committee to succeed Dr. Lewis A. Sexton, superintendent of the Hartford (Conn.) Hospital. Dr. Malcolm T. MacEachern, superintendent of the General Hospital, Vancouver, B. C., Canada, who is on a year's leave of absence to conduct a survey of Canada for the Victorian Order, succeeds Mr. Gilmore as vice chairman and is Canadian director for the movement. C. J. Cummings, superintendent of the Tacoma General Hospital, and Dr. Albert S. Hyman, superintendent of the Mount Sinai Hospital, Philadelphia, are the two new members appointed to the committee, of which Dr. Hugh S. Cumming, surgeon-general, U. S. Public Health Service, is also a member. The committee has issued the first call for names of hospitals planning to observe the third annual hospital day, May 12, 1923. Suggestions for programs and other information will be sent, on request, by the secretary, Matthew O. Foley, 537 South Dearborn Street, Chicago.

Carnegie Corporation.—A remarkable group of varied activities, together with gifts during the last eleven years of nearly $58,000,000, is disclosed in the annual report of the Carnegie Corporation, made public, February 5. The major interests at present receiving support wholly or largely from this corporation are: the Institute of Economics, Washington, D. C.; the food research institute at Stanford University, San Francisco; the National Research Council, Washington; the Potter Metabolic Laboratory, Santa Barbara, Calif.; the American School of Classical Studies, Athens, Greece. A total of $5,254,000 had been paid to beneficiaries during the year ended, September, 1922, of which $2,578,000 went to universities. Of nearly $58,000,000 expended during the eleven years of the corporation's existence, $23,415,000 has been given to Carnegie institutions: the Institute at Pittsburgh, the Foundation in New York, and the Institution, and the Peace Endowment in Washington, D. C. Schools and colleges have received $9,276,000; medical and health education, $3,266,000, and scientific research, $1,511,000. It is announced that the board of trustees will be enlarged from ten to fifteen members. The assets of the corporation amount to $130,000,000, which will be increased by about $10,000,000 on the final settlement of Mr. Carnegie's estate.

Importation of Narcotics Temporarily Suspended by Control Board.—Temporary but complete suspension of all applications to import narcotic drugs into the United States was put into effect this week through an order issued by the federal Narcotics Control Board. The official notice was sent out to all persons permitted under the law to import narcotics, including manufacturers actually engaged in manufacturing from crude opium or coca leaves products for the wholesale trade, for medical or other legitimate purposes. This step was taken to prevent the legal importation of narcotics until the board can determine the amount needed by the United States during the year for "medical or other legitimate purposes." Notice that the embargo has been laid down has been sent to all persons permitted to import, in the form of invitations to attend hearings in Washington looking toward determination of the amount of drugs needed for this country during the present year. The board consists of the Secretary of State, Secretary of Treasury and Secretary of Commerce. Decision to exclude all imported drugs under the act was declared by Mr. Hayward, secretary to the Narcotic Control Board, to be an important and far-reaching step in the war on narcotic drugs. As the importation of all narcotics except crude opium or coca leaves was prohibited by the Jones-Miller Act of May 26, last, leaving only two raw materials importable under the law, the action of the board effectively shuts down completely on all importations whatever of narcotic and habit-forming drugs into the United States. Under the Jones-Miller act such drugs as heroin, codein and cocain were prohibited from import under any conditions, only the crude materials being admitted by permission of the Federal Control Board.

LATIN AMERICA

Yellow Fever Eradicated from Peru.—It is announced by Dr. Henry Hanson, director of public health for the Republic of Peru and of the Peruvian yellow fever campaign carried out by the Rockefeller Foundation and the government, that Peru is free from yellow fever for the first time in history. There have been no cases reported since August, 1921, so practically the whole western coast of the Western Hemisphere may be said to be cleared of the disease.

FOREIGN

Clinical Research Association.—The *Journal of the Clinical Research Association* (Great Britain) has resumed publication for the first time since 1915. An improved design has been adopted, and, in addition to the scientific literature, space is now available for correspondence. Comments will be welcomed.

Alory-Gillois Prize.—The School of Medicine, Nantes, has offered a prize of 800 francs, with a medal, for the best essay on "Pulmonary Phthisis." The essay must be written in French, and the author's name enclosed in an envelop together with his qualifications. Competitors should forward their work to the Secretariat de l'Ecole de Médecine, Nantes, before June 30, 1923.

Personal.—Prof. C. Firket, of the chair of pathologic anatomy at Liége, has been elected president of the Royal Academy of Medicine at Brussels.——Dr. L. Asher, professor of physiology at the University of Berne, Switzerland, is planning to visit this country in the spring to deliver some addresses in medical centers.——Dr. B. A. Nocht, director of the Institute for Marine and Tropical Diseases, at Hamburg, has been asked to join the public health council of the League of Nations, and has gone to Geneva to take part in the discussions.——Dr. Gräff, privat-dozent for pathologic anatomy at the University of Heidelberg, has been invited to deliver a course of lectures in Japan.——Dr. Fedor Krause, professor of surgery at the University of Berlin, has returned from a long visit to South and Central America, his second visit within three years.——Dr. H. García Lagos, chief surgeon of the British Hospital at Montevideo, who has been visiting in this country, sailed from New York for Europe on the *America*, January 20.

Lisbon's Institute for Scientific Research.—A Portuguese merchant, who had amassed a fortune in Brazil and returned to Lisbon to live, recently bequeathed his fortune to found an institute for scientific research, naming Prof. Ferreira de Mira as the one to have charge of the institution. No specifications as to site, scope or other details were made, and no scientists knew of the provisions of the will in advance. As Prof. Ferreira de Mira had no personal acquaintance with the testator, and as he is the incumbent of the chair of biology, the council that was organized by the state for the creation of the institute decided that Lisbon should be the location, and the biologic sciences the field of the Bento da Rocha Cabral Institute for Scientific Research. The *Medicina Contemporanea* gives the details of the undertaking, and congratulates the country on this son, who was not only philanthropic but supremely intelligent. "He realized that the basis for all progressive civilization is in the development of the sciences, creating better conditions of living for all classes." The money will soon be available, and work will be begun at once.

Medical News from South Africa.—At a meeting of the Eastern Province Branch of the British Medical Association, held under the presidency of Dr. W. Duncan Miller, it was resolved to ask the South African Medical Association to meet in Grahamstown in 1924 instead of in October, 1923, as previously arranged.——Dr. T. W. Lowden of Johannesburg, was found dead from hyoscin poisoning (suicidal intent being indicated), December 19.——Dr. J. A. Kesier has been appointed medical inspector of schools for the Transvaal, to succeed Dr. Leipold.——The foundation stone of a new tuberculosis clinic was laid in Johannesburg in December by the mayor of the city.——Dr. Mackenzie has been appointed lecturer on skin diseases at the new University of Witwatersrand.——A limited liability company is reported to have been formed at Cape Town for the purpose of taking over a large, established undertaking business, with the object of combining with the business a funeral club and a medical aid branch, through which people will, for a fixed subscription, receive medical attention in case of illness, and burial in case of death. Of the three provisional directors, one is a physician and one a dentist.

Deaths in Other Countries

Dr. **David L. Davies,** justice of the peace and mayor of Neath, Wales.——Dr. **J. B. Haycraft,** emeritus professor of physiology at the University of Wales, aged 65.——Lieut.-Col. **A. A. Lyle,** R.A.M.C., at Douglas, Isle of Man, Jan. 9, aged 67.——The death is reported of Dr. **Johannes Orth,** Virchow's successor as director of the Pathology Institute at Berlin, professor emeritus of pathologic anatomy at the University of Berlin, and president for many terms of the Berlin Medical Society, aged 76. He read a paper on "Pathology and Its Relation to Other Sciences," at the St. Louis International Congress in 1904.——Dr. **José Madinaveitia,** the leading internist and psychiatrist of Bilbao.——Dr. **A. Carruccio,** professor of zoology and parasitology at the University of Rome.——Dr. **E. Cavazzani,** professor of physiology at the University of Ferrara.——Dr. **W. Hauser,** prominent in the public health service of Baden, aged 73.——Dr. **A. Kirstein,** noted for his autoscopy of the larynx. He retired from the practice of medicine some time ago to devote himself to painting.——Dr. **O. Dornblüth,** author of textbooks on internal medicine, psychiatry, dietetics and neurology, proprietor of a sanatorium at Wiesbaden, aged 62.——Dr. **A. Paetz,** director of the state institution for the insane at Alt-Scherbitz, aged 71.

Government Services

Shortage of Navy Medical Officers

Difficulty is being experienced in filling vacancies in the Medical Corps of the navy. A campaign is being inaugurated by the navy department for the purpose of inducing civilian physicians to enter the navy service. Letters are being sent out calling attention to the opportunities afforded. The shortage of medical officers has prevented the Surgeon-General of the navy from carrying out plans for advanced educational courses. Notwithstanding this shortage, several medical officers are undergoing special study and instruction in advanced professional work at the Massachusetts General Hospital, Boston, and at the Mayo Foundation at Rochester, Minn. Regular classes of navy medical officers are being assembled for a graduate course at the Naval Medical School in Washington, D. C., and in the army school for flight surgeons at Mineola, L. I. In connection with the class to be sent to the latter school, Surgeon-General Stitt is desirous of receiving applications for assignment to the next class, to replace the present class of eleven officers now taking the course. Flight surgery has become an important activity of the Naval Medical Corps. Sixty-five medical officers will be assigned for duty in the aviation branch of the naval establishment.

Chemists Awarded Medals

Distinguished service medals for meritorious work by officers in the Chemical Warfare Service serving with the Expeditionary Force during the World War were awarded to chemists who were connected with or assigned to the dangerous work of coping with the deadly effects of gas in both defensive and offensive warfare. The officers selected are cited for marked scientific attainments. The list includes: Cols. R. F. Bacon and E. W. Johnston, Corps of Engineers; Col. J. W. Schulz, Chemical Warfare Service; Lieut.-Cols. J. H. Hilderbrand, B. C. Goss and H. L. Gilchrist, Medical Corps; Lieut.-Cols. G. W. Lewis, R. M. Smith and J. E. Zanett, Chemical Warfare Service; Major S. Karl Connell, Medical Corps, and A. M. Prentiss, Chemical Warfare Service.

New Bill Follows President's Veto

The new Senate bill providing for increased pensions for veterans, their widows and nurses, of the Mexican and Civil wars was favorably reported to the Senate this week by the Committee on Pensions. It eliminated many objectionable features that caused President Harding to veto a similar piece of legislation that had passed both the Senate and the House.

Veterans' Bureau Medical Corps

In retiring as medical director of the Veterans' Bureau, Lieut.-Col. R. U. Patterson advocated the establishment of a medical and dental corps for the bureau. He paid high tribute to the cooperation in the medical division of the bureau by medical officers in other branches of the government and by civilian physicians, but said the "salvation" of the medical department of the Veterans' Bureau lay in establishing and maintaining its own corps of medical and dental officers. He pointed out the necessity of keeping high the standards of the medical personnel of the bureau, and expressed the belief that this could best be achieved if appointment to the corps were made by strict examination only.

Medical Supply Depots

Pursuant to instruction of the Secretary of War, the organization of an army medical supply depot, organized reserves, to be known as Army Medical Supply Depot No. 16 (Fourth Corps Area Unit) has been authorized; also Base Medical Supply Depot No. 3 (Illinois State Unit); Army Medical Supply Depot No. 18 (Eighth Corps Area Unit) and Army Medical Supply Depot No. 17 (Eighth Corps Area Unit).

Bill for Retirement of Emergency Officers Tabled

The Bursum bill, authorizing the retirement of disabled volunteer and emergency officers who served during the World War on the same basis as Regular Army officers

with reference to pay, allowances and other privileges, was defeated in the House of Representatives Committee on Military Affairs by a vote of 8 to 7. The measure passed the Senate several months ago. It is one of the pieces of legislation being urged by organizations of World War veterans, including the American Legion. A party caucus was recently called in the House to consider the advisability of passing the bill, but no action was taken, because of lack of a quorum.

Status for Sanitary Engineers

A bill was introduced into the Senate, December 27, by Senator Watson of Indiana which provides that sanitary engineers of the U. S. Public Health Service shall be appointed and commissioned in the regular corps of the service with the same pay, allowances and rank as medical officers.

Evacuation Hospitals Authorized

Pursuant to instructions of the Secretary of War, the organization of the following hospitals has been authorized: Evacuation Hospital No. 22 (Milwaukee Surgical Society Unit, Milwaukee); Evacuation Hospital No. 4 (Washington University School of Medicine, St. Louis), and Evacuation Hospital No. 1 (Johns Hopkins Hospital Unit, Baltimore).

Foreign Letters

LONDON

(From Our Regular Correspondent)

Jan. 15, 1923.

Differentiation of the School Curriculum for Boys and Girls

The Consultative Committee on the Differentiation of the Curriculum for Boys and Girls in Secondary Schools, whose operations were suspended during the war, has now presented a report. The committee was appointed by the board of education. It consists mainly of educationists, but includes Dr. J. G. Adami, chancellor of the University of Liverpool, formerly professor of pathology at McGill University. Though the problems are educational, they have an important medical aspect. In consequence of the eminence of the members and the thorough nature of the inquiry, the report will long remain the most authoritative pronouncement on the subject. It begins with an exhaustive history of the curriculums for boys' and for girls' schools, with a consideration of the objections and criticisms that have been directed against them, especially on the tendency in the second half of the last century to make the curriculum for the girls conform to that for the boys. It is pointed out that the education of the girls has passed through two stages and perhaps is now entering on a third. To 1850, and even later, it was assumed that the education of girls must be different from that of boys, because they belonged to the "weaker" sex. This was the stage of feminine accomplishments and of educational inefficiency. In the next stage, perhaps now drawing to a close, efficiency was held to depend on identity of education of the sexes, which was based on their equality. It was marked by a great advance in efficiency. But if new strength was gained, old and delicate graces were perhaps lost. The committee holds that we are now entering on a third stage in which we can afford to recognize that equality does not demand identity, but is compatible with, and even depends on, a system of differentiation under which each sex seeks to multiply its own peculiar talents.

The committee is not convinced that there are clear and ascertained differences between the sexes on which an educational policy can readily be based, but considers that it would be fatal, at the present juncture, to prescribe one curriculum for boys and another for girls. It would prescribe as little as possible for either, because it is convinced that both should be free to find and follow their tastes, and because they desire that teachers be free to aid and guide the development of their pupils. In view of medical and other evidence, the committee urges that the pace of education in girls' schools be adjusted to the strength and opportunities for study of the average pupil. Not that it pleads for any special consideration or the establishment of a lower standard for the "weaker" sex, for it is convinced that, given the same conditions, girls can match the achievement of boys. But the conditions of health are not the same and there is much less freedom from other demands for girls. The growing tendency to organize and emphasize school activities are modern developments which stand in need of criticism and control, particularly in girls' schools. They may check what is meant to be fostered—the full and free development of individual initiative and vigor.

Games for girls occupy much of the report. As the general conscientiousness of girls extends to their sports, there is a danger that some pupils who are overconscientious and docile may exhaust themselves physically and mentally for the supposed good of the school. Due regard should be paid to the strain undergone by the girls in the ordinary normal daily routine at home and in the journey to and from school. While thinking that games should form part of the ordinary curriculum for girls, the committee is not convinced that they should be made compulsory. They favor hockey, lacrosse, tennis and ricket, but not football.

The physiologic evidence and a large part of the evidence from teachers disclosed that girls are more liable to physical and mental fatigue than boys. Most boys, especially at adolescence, have a habit of "healthy idleness," and thus can protect themselves against overpressure; whereas girls are more amenable to authority and more industrious. Therefore, the traditional arrangement by which girls' school hours are shorter than boys' is sound. On the differences of achievements, the report states that girls as a rule show equal or superior originality and capacity in English literature, history, modern languages and possibly biologic sciences, but are inferior to boys in ancient languages, especially Latin, and in mathematics and the dependent sciences.

The more important recommendations of the committee were: The school time tables should be modified to allow boys and girls more free time in which to develop their individual interests. The first school examination for girls should be about a year later than for boys. More attention should be devoted by school physicians and others to protecting girls against physical fatigue and nervous overstrain. In girls' day schools, the amount of home preparation should be reduced, as it is in some instances excessive, in view of heavy domestic duties.

The Dangers of the Use of Water Gas for Illumination

In a letter to the *Times*, Prof. W. A. Bone calls attention to the dangers of the prevalent use of water gas. Recently, three persons in a house were poisoned during sleep by gas which, escaping from a broken mainpipe in the roadway, percolated into a house not piped for gas. A straight coal gas contains only 7 or 8 per cent. of carbon monoxid, which in ordinary circumstances is not dangerous; but water gas, which is now frequently mixed with coal gas, contains from 42 to 45 per cent.—a highly dangerous proportion. Professor Bone calls for an inquiry into the subject of gas poisoning, which has increased of late.

The Medical Research Council

The Medical Research Council was appointed under the National Insurance Act. The report for the year ending September, 1922, has just been issued. The sum provided by Parliament for the year was $650,000. A large number of highly important researches have been carried out or are

proceeding. The difficulty in experimentally investigating the diseases attributed to filtrable viruses has led to arrangements being made for an experimental study of distemper in dogs. Other researches, of which only a few can be mentioned, are on the effect of overdoses of light on the resistance of tissues to bacteria, the effects of balneotherapy on metabolism, improvement of microscopic methods, the standardization of pathologic methods, with a view to uniformity of results, the standardizing of arsphenamin compounds, the dietetic factors causing abnormal development of the thyroid, and research work in clinical medicine at various centers.

Great Reduction in the Mortality from Diarrhea and Enteritis

The accompanying table shows a remarkable diminution in the mortality from diarrhea and enteritis in recent years:

LONDON: MORTALITY FROM DIARRHEA AND ENTERITIS

	All Ages per Thousand Living	Under 1 Year per Thousand Births
1911	4.28	127
1912	0.66	20
1913	1.50	43
1914	1.93	59
1915	1.34	45
1916	0.78	24
1917	0.86	29
1918	0.61	23
1919	0.64	22
1920	0.42	13
1921	1.26	43
1922	0.15	5

The mortality of the last year is not only the lowest, but it has never been approached. The diminution is to be explained by improved sanitation and, above all, by the widespread instruction in disease prevention given by various health agencies. There is more sterilization of milk, more careful cleansing of bottles and feeding cups, and better personal hygiene. The breeding places of flies are being destroyed with care and enthusiasm. The change from horse-drawn vehicles to motors has led to the disappearance of stables and manure heaps.

The Prevention of Venereal Disease in New Zealand

Some striking recommendations are contained in the report of the committee of the board of health, appointed in New Zealand to advise as to the best means of combating and preventing venereal disease. Their legislation is far in advance of that of the mother country, but resembles that of Australia, which was described in THE JOURNAL some time ago. The outstanding recommendation is the adoption of what is known as the system of conditional notification embodied in the West Australia act. The cases are notified by the physician to the health department by number or symbol; the name of the patient is not sent in unless he discontinues treatment before he is free from infection, and refuses to go either to a clinic or to another physician. The names of those who conform to the regulations thus never pass beyond the physician attending them. Even when the names of those who do not are sent to the health department, in order that steps may be taken in the interest of public health, they are given only to officers, who are pledged to keep them confidential. It is also recommended that all proceedings taken under any act having reference to venereal disease should be held in private unless the defendant applies for a hearing in open court. The committee suggests that in any legislation which may be passed there shall be a provision that every physician, on finding that a patient is suffering from venereal disease in a communicable form, shall give notice to the director general of health on a prescribed blank, stating age, sex and occupation, and the nature of the disease, but omitting the patient's name and address.

The committee lays stress on the duty of self-control and also on the duty of parents in instructing and training their children. The classification and, when necessary, the segregation of mentally deficient adolescents is also recommended. Clinics should be made more available by being open continuously. Every effort should be made to insure privacy. A specially trained nurse should be in attendance at women's clinics for prompt preventive treatment of those who have exposed themselves to infection. Woman patrols should be appointed to perform in other centers the kind of work that is being carried on at Christchurch. The work, especially of an educational nature, which is being done by the social hygiene society of Christchurch, is recommended as a model. The committee is entirely opposed to the continental system of licensed brothels or a revival of the contagious disease act in any shape or form. When a recalcitrant patient refuses to be examined by the physician appointed by the director general of health, the latter should be empowered to apply for his arrest and detention in a public hospital or other place of treatment until his condition becomes noninfectious. The committee recommends further provisions for persons suffering from venereal disease who are not under medical treatment and are likely to infect others.

If the director general of health has reason to believe that any person is suffering, he may call on him to produce a medical certificate, which may be obtained free from any hospital or venereal disease clinic. If the person refuses, he may be taken before a magistrate, who may order a medical examination. Penalties, including detention in a prison hospital, should be provided for recalcitrant cases. The proceedings in all these cases are to be held in private, unless the defendant desires a public hearing. The committee recommends that before license to marry is issued, the parties sign a blank, answering certain questions as to freedom from communicable disease and from mental disease, making a sworn statement that the answers are true. They recommend the adoption of a provision of the Queensland act making venereal disease a ground for annulling a marriage contracted while one of the parties was suffering from venereal disease in an infectious stage, provided the other party was not informed of the fact; also, that it should be the duty of a physician attending a case of venereal disease, if he believes that the patient intends to marry, to warn him or her against doing so; and if he or she persists, it should be the duty of the physician to notify the case to the director general of health, whose duty it would be to inform the other party or the parents or guardian. Strengthening of the law prohibiting treatment of venereal disease by unqualified persons is recommended. While regarding these legislative measures as of great importance, the committee earnestly emphasizes the moral and social aspects of the question. With the changing social conditions, especially in large towns, it states that the home influence and training, which is the best safeguard for the young, is being lost.

PARIS

(From Our Regular Correspondent)

Jan. 12, 1923.

The League of Nations' Health Conference

The fifth session of the League of Nations Health Conference has just opened at Geneva. For the first time, Professor Nocht, of the Institute for Tropical Diseases, Hamburg, the delegate from Germany, and Dr. Semachko, public health commissioner of soviet Russia, will be present and take part in the deliberations. At this session, a representative of the United States Public Health Service will be appointed a member of the conference, and it is also planned to establish a collaboration with the international bureau at Wash-

ington. Dr. Rajchmann reported an increase of epidemics in Russia, due, to a great extent, to the recrudescence of the famine; but the appearance of a tropical type of malaria is also playing a part. Also the epidemics that were already present have spread farther.

High Mortality Among Wards of the State

The *Journal officiel* has published a circular letter addressed to the prefects of the departments by M. Strauss, minister of public health, in regard to the measures to be taken to check the mortality among children in ward of the state, which has of late reached an extremely high figure, the average being above 38 per cent. The main cause of this situation is the gradual disappearance of wetnurses. Ten years ago, the department of the Seine had 1,400 wetnurses, whereas now there are only 150. As additional causes, congenital debility due to syphilis, tuberculosis and constitutional inferiority may be mentioned. The minister recommends that in every department of France there be established retreats and welfare centers for prospective mothers, mothers during convalescence from childbirth, and nursing mothers who are homeless. The value of such welfare work for mothers is seen in its tendency to prevent, or at least to diminish, abandonment, and sixteen departments have already learned to appreciate the remarkable results that are secured by the establishment of *maisons maternelles*. He advises further that the number and the scope of the foundling homes be increased, that the means of transporting children in ward be improved, and that, as far as possible, wards of the state be reared in rural centers established on a similar plan to the foundations of the Oeuvre Grancher. The hospitalization of mothers should be prolonged, and societies, under private control, that endeavor to prevent the abandonment of the new-born should be encouraged. Special protection should be given to weak children from the time of their birth, and emphasis should be placed on the prophylaxis of venereal diseases.

The Traffic in Narcotics in 1922

The executive department of the service of judiciary research, as established by the Sûreté générale, which is the agency that collects information pertaining to the suppression of the illegal traffic in narcotics throughout the territory of France, has just issued an annual report of its work, for the information of the League of Nations. It appears from this report that, during the year 1922, the police services subject to the control of the Sûreté générale arrested or incriminated 314 persons, who were brought before the competent courts on the charge of having been engaged in the illegal sale, possession or consumption of narcotic substances. During this period, 446 different cases were examined into by the same services, and the court proceedings that followed resulted in the seizure of quantities of drugs: 51.848 kg. of opium, 1.290 kg. of hashish, 24.781 kg. of cocain, 3.433 kg. of morphin, and 112 gm. of heroin. These toxic substances represent a mercantile value of approximately 300,000 francs.

Intellectual Relations with the United States

A Frenchman who is traveling at present in the United States, where he comes in contact with university and art centers, recently sent a communication to the *Temps*, to which he is an occasional contributor, in which he gives some interesting observations, especially as regards the circulation of French books in the United States. He holds that French books are not as widely used in the United States as they would be if our publishers would take the trouble to send to the American universities catalogues of books in certain special fields, such as medicine, law, sociology and history. Another group of books that would awaken great interest in America would be books published in France on the United States or on American subjects. The American Library Association publishes every month a bulletin containing lists of new books, which is relied on by American public libraries, at least 800 in number, for basic information with respect to their purchases. The library association has expressed a willingness to list in this bulletin fifteen French books each month, on condition that a carefully selected list be prepared and copies of the fifteen books recommended be sent them. The books thus far recommended have not been selected with the necessary care, and the copies for examination have not been received regularly.

The Centenary of the Death of Jenner

At the meeting to be held, Jan. 23, 1923, the Academy of Medicine will commemorate the centenary of the death of Jenner. Papers and addresses on the subject of vaccination will be on the program. An exhibit of relics and various documents pertaining to the history of vaccination will be held at the academy headquarters.

The Influence of Environment on Height

For a number of years, Prof. E. Pittard of Geneva, together with several collaborators, has been making comparative studies on the height of the inhabitants of Switzerland. He has studied by cantons the height of men called to the colors, and has considered the possible effects of environment on variations with respect to this hereditary character. Pittard recently presented to the Société de physique et d'histoire naturelle of Geneva the results of a study made by Mlle. M. Ginsberg on the height of 30,301 recruits in the canton of Bern. The height was considered in relation to the geographic division according to districts; classification according to language, the general physical characteristics of the canton (Jura, plateau, Alps), the geologic nature of the soil inhabited, altitude, the grouping (whether urban or rural), and according to the social conditions of the persons concerned. The investigator found the average height of the men from the canton of Bern to be 1.652 meters, which is considerably above the average height of men in Switzerland as a whole (1.629 meters). From the standpoint of linguistic groups, the height ranged from 1.654 meters in the German districts to 1.661 meters in the French districts (1.657 meters in the mixed districts). The average height varies distinctly with the geologic nature of the soil. Height diminishes as altitude increases, at least up to 1,000 meters. For altitudes between 400 and 600 meters, the average height was 1.659 meters; between 600 and 800 meters, 1.649 meters; between 800 and 1,000 meters, 1.646 meters. Height increases with the density of the population: from 1 to 1,000 inhabitants, 1.636 meters; from 1,000 to 5,000 inhabitants, 1.648 meters; from 5,000 to 10,000 inhabitants, 1.654 meters; more than 10,000 inhabitants, 1.677 meters. Height varies also according to occupation or social environment. The height of agriculturists was 1.642 meters; laborers, 1.653 meters; merchants, 1.664 meters; liberal professions, 1.695 meters.

The Celebration at Strasbourg of the Centenary of Pasteur

The centenary of Pasteur will not be celebrated at Strasbourg until several months hence. It will be marked by: 1. The unveiling of a monument erected to the memory of Pasteur in front of the University of Strasbourg by an international subscription. 2. The establishment of a Pasteur museum intended to show the various stages in Pasteur's progress by means of a retrospective view of the works, apparatus and instruments that were created or utilized by the scientist. In this museum will be shown also the evolution of microbiology: technic, documents, anatomic preparations, apparatus and results. The scientists of the world are

invited to take part in this celebration, and are requested to send to the committee on arrangements (Comité d'organisation) any works, documents or technical apparatus that they are desirous of exhibiting to the public. 3. The inauguration of a general exposition to be called the "Exposition internationale du centenaire de Pasteur," which is intended to illustrate the effects that a knowledge of things infinitesimally small has exerted on all branches of human activity, such as theoretical and applied hygiene, science, industry, habitation, alimentation and agriculture. The address of the commissioner in charge of the exposition is: Commissariat général de l'exposition pastorienne, Institut d'hygiène, 3, rue Koeberlé, à Strasbourg, France.

The Abuse of Pharmaceutic Specialties

I have mentioned in several letters the regrettable fact that pharmaceutic specialties or proprietaries are coming to be used in France to an inordinate extent. In the *Concours médical*, Dr. Damey raises an energetic protest against those specialties that are manufactured according to secret formulas. It is a curious circumstance that secret remedies are prohibited in France, but nevertheless, for fiscal reasons, a tax has been imposed on pharmaceutic specialties the formulas of which have not been published. The law tolerates, therefore, what it seems to prohibit.

Damey points out the serious objections to this tolerance. A mother calls hastily a physician to treat an infant that she fears she has poisoned. She states that, for several days, the child has not seemed well. She had suspected (often owing to the suggestions of some kind friend) that such and such a disease was the cause of the condition of the infant, and had administered such and such a remedy that her kind friend had recommended, or possibly that she had seen advertised in glowing terms in her fashion journal. As the child does not get better but appears weak and out of sorts, the mother begins to worry, becomes excited, and finally hastens to the physician and asks, as she hands the physician the bottle of medicine, "Tell me, doctor; do you think that this medicine can have made the baby sick?" The physician inspects the bottle, which is covered with a beautiful label, and reads the high sounding, semiscientific and semifantastic name of the remedy, usually a conglomeration of French, Greek and Latin, but not throwing any light on the composition of the contents.

Damey states that every day—through pamphlets, the daily papers, postal cards, blotters, and even through our professional journals—we receive announcements that certain proprietary articles have been put on the market; but, in spite of the fact that much of this "literature" is directed to physicians, it never deigns to mention the composition or the nature of the product concerned. Are we to believe, by reason of the frequency and the persistence with which these methods are employed, that there are physicians who use these products without further guarantee than the mere affirmation by the manufacturers that they constitute "the best treatment known?" Damey concludes, and with reason, it would seem, that, although the law authorizes tacitly the existence of such proprietaries in that it imposes a tax on them, it is the duty of physicians to protest and to form the resolution to prescribe nothing with which we are not sufficiently familiar to assume the responsibility. He urges that we demand that, in addressing us, manufacturers of pharmaceuticals shall treat us as scientific men and use language such as is becoming to us, instead of the vapid commercial style that now prevails.

In further support of this idea, in a letter addressed to the *Presse médicale*, several physicians of Biarritz complain that the inordinate use of proprietaries secured without a prescription has become a menace to public health and is analogous to alcoholism. As a result, chronic diseases may pass the stage at which they are still curable, and contagious affections are allowed to develop without a physician being called in.

BERLIN

(From Our Regular Correspondent)

Jan. 12, 1923.

Undernutrition and Scurvy

The state of undernutrition existing in many countries of Europe is made apparent by the appearance of cases of scurvy. During recent months, 386 cases of scurvy, which was formerly unknown in Germany, have been reported from Prussia alone. The lack of coal has caused an increase in the diseases associated with "colds." For the first quarter of 1922 the number of deaths from pneumonia (17,785) shows a marked increase over the mortality for the first quarter of 1921 (14,549). The lack of shirts and underwear, poorer bathing facilities, and the high cost of soap, make the proper care of the body more difficult, whereby many skin diseases, especially furunculosis, are induced.

Coloration of Cocain and Other Toxic Alkaloids to Prevent Error and Misuse

According to the statements of Dr. W. Köhler in the *Zntralblatt für Chirurgie*, the prophylactic coloration of cocain is carried out by means of a trisulphonated and phenylated fuchsin of "water blue 2 R." A request for the general introduction of this form of protective coloration has been sent to the central public health office. Further experiments in the coloration of other alkaloids with other dyes are to be made. If all producers were compelled by an international agreement to color cocain in this manner, it would reduce considerably the extensive misuse of cocain. The cocain addict snuffs cocain up the nose in heavy doses. Cocain that has been colored blue causes a marked coloration of the nostrils. This stigmatizing mark will cause addicts to discontinue the use of cocain.

Psychology of Witnesses' Testimony

Weygandt, director of the Hamburg hospital for the insane, following out an idea of the psychologist W. Stern, has had a special film prepared to illustrate the psychologic value of witnesses' testimony. At a recent meeting of the Hamburg forensischpsychologische Gesellschaft, a report of which Rittershaus gives in the *Psychiatrischneurologische Wochenschrift*, a film was shown representing a scene in a tavern; a fight develops; one of the guests draws a large pocket knife and opens it, but is thrown out of the room by the other guests before he has a chance to use it. One of the guests remaining suddenly discovers that some one has taken his hat and left another in its place. This incident has nothing to do with the scene in which a knife was drawn. When the last guest has gone, there still hangs a lone silk hat on the hat rack. It belongs to no one visible in the picture. The experiment covered about twenty questions that those who assisted in the experiment had to answer after the film had been shown. Four of the participants, who endeavored to be extremely cautious and therefore answered only a fourth of the questions asked, had nevertheless 26 per cent. of the answers wrong; while sixteen participants, who answered from six to ten questions, had 43 per cent. of errors. Twenty-two participants, who answered from eleven to fifteen questions, had 36 per cent. of their answers wrong, and thirteen participants, who answered more than three fourths of the questions, had 32 per cent. of wrong answers. A series of questions as to what actually happened produced 53 per cent. of correct answers. Those most careful with their replies and who answered only a few of the questions had 48

per cent. wrong answers, whereas the keenest observers, who had answered three fourths or more questions, gave 40 per cent. wrong answers. Rittershaus discusses, among other things, also the value of children's testimony. He cites two instances in point. In one case the crucial testimony was to be given by a boy. He could not be heard as a witness, however, because, at the beginning of the hearing, he had an attack of what appeared to be hysterical convulsions. Any psychiatrist will naturally be inclined to question the credibility of this probably hysterical child. In the second case, psychopathologic factors did not play any part. It was a question as to what some children actually saw and what imagination and other factors led them to believe they saw. Rittershaus says: "The imagination of the children, stimulated by the horrors recounted in the press, and likewise doubtless by the stories they had heard their elders tell, was still further aroused by the things they had found in the gipsies' camp, and by the time they got back to town the ragged shirt, the old pasteboard box and the 'bloody knife' had metamorphosed into the mutilated body of a child."

Personal

Dr. Alfred Kirstein, known for his invention of autoscopy of the larynx, died recently at the age of 60. For some time past, Kirstein had been devoting himself wholly to the art of painting.

Sanitätsrat Otto Dornblüth, the nerve specialist, died in Wiesbaden, January 5, at the age of 62. He was the author of a widely used compendium on internal medicine, and also of a dictionary of clinical terms. He wrote also a compendium of psychiatry, a dietetic cook book, and numerous treatises on the treatment of nervous and mental diseases.

January 9 was the centenary of Frederick von Esmarch, the surgeon of Kiel, who was the inventor of the Esmarch bandage with which to expel the blood from the part to be operated on.

Marriages

HARRISON WARNER STUCKNEY, Major, M. C., U. S. Army, Fort Hancock, N. J., to Miss Cornelia Lansing of New York, December 16.

WILLIAM DULANEY ANDERSON, Chattanooga, Tenn., to Miss Rosalie Slaughter of Lynchburg, Va., December 16.

FRANCIS ERNEST LE JEUNE, New Orleans, to Miss Anna Lynn Dodds of Clarksdale, Miss., recently.

JOSEPH FREDERICK PRINZING, Denver, to Miss Gertrude Norman of Raton, N. M., December 9.

HANS O. FOUCAR, Rochester, Minn., to Miss Janet Stevens of London, Ont., Canada, December 14.

FRED MONTZ, Lowden, Iowa, to Miss Charlotte Mallart of Cedar Rapids, at Tipton, November 4.

LEHMAN WILLIAM WILLIAMS to Miss Metta Martha Harr, both of Savannah, Ga., November 22.

HOMER RAYMOND BLINCOE, New Orleans, to Miss Elizabeth Hahn of Mobile, Ala., December 30.

ROY E. SWANSON to Miss Katherine Jacobson, both of Alexandria, Minn., December 28.

ESLIE ASBURY to DR. MARY S. KNIGHT, both of Rochester, Minn., at Cincinnati, January 2.

JOSEPH C. BAIRD, Eau Claire, Wis., to Miss Amalia C. Olson of Minneapolis, December 10.

BALDWIN BORRESON, Bemidji, Minn., to Miss Alice Graves of Duluth, December 30.

JULIAN HOLT BUFF to Miss Joyce Louise White, both of Atlanta, Ga., January 4.

ERIC JULIEN, Turlock, Calif., to Miss Mabel Botham of Berkeley, December 31.

ANTON H. NERAD to Miss Florence Meisch, both of Argyle, Minn., November 30.

Deaths

Robert Thaxter Edes, Springfield, Mass.; Medical School of Harvard University, Boston, 1861; formerly professor of materia medica and clinical medicine at his alma mater, and at various times lecturer on nervous diseases at Columbian University, Washington, D. C., materia medica and therapeutics at Dartmouth Medical School, Hanover, N. H., and diseases of the kidneys at Georgetown University School of Medicine, Washington, D. C.; member of the Massachusetts Medical Society, the Association of American Physicians; Fellow of the American Academy of Arts and Sciences, and first president of the American Neurological Association; Civil War veteran; at one time physician to the Boston City Hospital, the Garfield Memorial Hospital, Washington, D. C., and the Adams Nervine Asylum, Boston; author of "Physiology and Pathology of the Sympathetic or Ganglionic Nervous System," "Therapeutics and Materia Medica," and "The Therapeutic Handbook of the United States Pharmacopoeia"; aged 84; died, January 12, from senility.

Carlos Montezuma ✠ Chicago; Chicago Medical College (Northwestern University Medical School), 1889; instructor of clinical medicine at his alma mater; died, January 31, on the McDowell Indian Reservation, Ariz., from pulmonary tuberculosis. Dr. Montezuma was born in Arizona in 1867 of Apache Indian parents. He served at various Indian agencies as surgeon for the Interior Department from 1889-1896. He was formerly instructor in stomach and intestinal disease at the Post-Graduate School, and instructor in medicine at the College of Physicians and Surgeons, Chicago. He was editor of the Indian magazine *Wassaja*, and author of "The Indian of Today and of Tomorrow."

Ernest Boyen Young ✠ Boston; Medical School of Harvard University, Boston, 1896; instructor in gynecology at his alma mater; member of the American Gynecological Society, the Obstetrical Society of Boston, the American Urological Association, the New England Branch of the American Dermatological Society; chief surgeon to the Boston City Hospital, and formerly staff member at the Massachusetts General Hospital, and the Hospital for Women and Children; served during the World War; aged 53; died, January 17, from pneumonia.

Max Wachsman, Brooklyn; Albany (N. Y.) Medical College, 1901; member of the Medical Society of the State of New York; attending physician to the Nose, Throat and Ear Department of the Eastern District Dispensary and the Long Island College Hospital; aged 46; died, January 19, as the result of an attack of lethargic encephalitis, contracted three years ago.

Oldron Aloysius Mitchell, St. Mary, Ky.; Kentucky School of Medicine, Louisville, 1905; member of the Kentucky State Medical Association; served in the M. C., U. S. Army, during the World War; aged 39; was found dead beneath his automobile which had plunged over a 50-foot embankment near Raywick, January 12.

Samuel Hess Heller, Lancaster, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1899; member of the Medical Society of the State of Pennsylvania; formerly on the staff of the Lancaster General Hospital; aged 49; died, January 21, from cerebral hemorrhage.

Theodore Clarke Miller, Massillon, Ohio; Charity Hospital Medical College, Cleveland, 1867; Civil War veteran; formerly on the faculty of Western Reserve University School of Medicine; for forty years city health officer of Massillon; aged 80; died, January 21, from senility.

Robert S. Stewart, Washington, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1869; member of the Medical Society of the State of Pennsylvania; Civil War veteran; formerly on the staff of the Washington Hospital; aged 85; died, January 10, from senility.

Albert H. Kunst, Parkersburg, W. Va.; Starling Medical College, Cincinnati, 1868; member, and former president, of the West Virginia State Medical Association; for many years superintendent of the Weston State Hospital; aged 79; died, January 17, from heart disease.

James W. Hill, Hopkinsville, Ky.; Medical Department University of Louisville, Lonisville, 1889; formerly superintendent of the State Institution for the Feeble-Minded, Frankfort; served during the World War; aged 53; died, January 19, from chronic nephritis.

James Edgar Yarbrough ✠ Erick, Okla.; University of Arkansas Medical Department, Little Rock, 1909; secretary of the Beckham County Medical Society; served in the M. C., U. S. Army, during the World War; aged 46; died in December, from heart disease.

Embry Pryor Wilson, Houston, Miss; Memphis Hospital Medical College, Memphis, Tenn., 1902; member of the Mississippi State Medical Association; served in the M. C., U. S. Army, during the World War; aged 46; died, January 12, from influenza.

Frederick J. Schug, Tacoma, Wash.; Columbus (Ohio) Medical College, 1876; member of the Washington State Medical Association; for twelve years city health officer; surgeon, U. S. Public Health Service, since 1897; aged 68; died, January 17.

David J. Chaffee, Rochester, N. Y.; Cleveland-Pulte Medical College, Cleveland, 1863; Homeopathic Medical College of Pennsylvania, Philadelphia, 1867; practitioner in Rochester for more than half a century; aged 87; died, January 28, from senility.

George Banker Schwachtgen, Aurora, Ill.; Rush Medical College, Chicago, 1910; formerly city health commissioner; proprietor of the Lincoln Hospital; aged 38; died, January 16, from injuries received when his automobile was struck by a train.

Wallace M. Brackett, Independence, Iowa; Chicago Medical College, Chicago, 1876; Civil War veteran; for several years mayor of Livermore; former editor of the *Hancock County Democrat;* aged 76; died, January 11, from uremia.

Charles E. Woodward ✠ West Chester, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1874; formerly secretary of the city board of health and registrar of vital statistics; aged 76; died in January, from pneumonia.

Robert Berrien Ridley, Sr., Atlanta, Ga.; Jefferson Medical College of Philadelphia, 1869; Civil War veteran; formerly on the staffs of the St. Joseph Infirmary and the Grady Hospital; aged 80; died, January 22, from pneumonia.

Francis Daniel Merchant, New York; Columbia University College of Physicians and Surgeons, New York, 1890; member of the Medical Society of the State of New York; aged 56; died, January 13, from carcinoma of the liver.

Frank E. Seymour, Fort Dodge, Iowa; State University of Iowa College of Medicine, Iowa City, 1879; president of the Fort Dodge National Bank; aged 70; died, January 14, in Long Beach, Calif., from cerebral hemorrhage.

Francis B. Loring, Washington, D. C.; Medical School of Harvard University, Boston, 1874; member of the Medical Society of District of Columbia and of the American Ophthalmological Society; aged 72; died, January 14.

Frank Wolf Wood, Portland, Ore.; Rush Medical College, Chicago, 1897; member of the Oregon State Medical Association; aged 50; for many years secretary of the state board of medical examiners; died, January 16.

Daniel Eugene Eagle, Statesville, N. C.; Johns Hopkins University Medical Department, Baltimore, 1922; aged 26; intern at Johns Hopkins Hospital, Baltimore, where he died, January 22, from abscess of the liver.

Charles Inches, Scribner, Neb.; New York University Medical College, New York, 1868; member, and former president of the Nebraska State Medical Association; aged 78; died, January 11, from heart disease.

Geronimo Carreras Delgado ✠ San Juan, Porto Rico; University of Seville, Spain, 1880; president of the board of medical examiners of Porto Rico; aged 67; died, January 21, from cerebral hemorrhage.

John Henry Musser, Lampeter, Pa.; Jefferson Medical College of Philadelphia, 1866; member of the Medical Society of the State of Pennsylvania; aged 77; died, January 19, from cerebral hemorrhage.

Harry Wright McKee, New Castle, Pa.; Jefferson Medical College of Philadelphia, 1887; member of the Medical Society of the State of Pennsylvania; aged 60; died, January 13, from heart disease.

Clyde C. Wallace, Cruger, Miss.; University of Tennessee College of Medicine, Memphis, 1912; died, January 15, from injuries sustained when the automobile in which he was driving overturned.

Charles M. Morrill ✠ Havana, Ill.; Eclectic Medical Institute, Cincinnati, 1876; aged 71; died, January 19, from the effects of burns received when his clothes ignited from sparks from his pipe.

William M. Craig, Petersburg, Ill.; Missouri Medical College, St. Louis, 1887; member of the Illinois State Medical Society; aged 65; died, January 19, from pneumonia and heart disease.

Robert P. Muellenbach, New York; New York University Medical College, 1887; member of the Medical Society of the State of New York; aged 72; died, January 14, from cerebral hemorrhage.

Elton Mayrant Johnson ✠ Portland, Ore.; State University of Iowa College of Medicine, Iowa City, 1897; aged 52; died suddenly, January 18, at the Emanuel Hospital, from cerebral hemorrhage.

Louis Bush Simpson, Fairfield, Ohio; Ohio Medical University, Columbus, 1898; member of the Ohio State Medical Association; aged 46; died, January 17, from pleuropneumonia.

Benjamin Matthias Bartilson, Braddock, Pa.; Jefferson Medical College of Philadelphia, 1893; on the staff of the Braddock General Hospital, where he died, January 18, aged 57.

Charles Henry Frederick, Lorain, Ohio; Western Reserve University School of Medicine, Cleveland, 1891; member of the Ohio State Medical Association; aged 54; died, January 22.

Ban S. Brown, Kerens, Texas; University of Texas Department of Medicine, Galveston, Texas, 1900; member of the State Medical Association of Texas; aged 53; died, January 13.

Zaphney Orto, Pine Bluff, Ark.; Miami Medical College, Cincinnati, 1872; president of the Simmons National Bank; veteran of the Spanish-American War; aged 80; died, January 22.

Irving Sylvester Fogg, Norwood, Mass.; Medical School of Harvard University, Boston, 1877; member of the Massachusetts Medical Society; aged 70; died, December 29, from senility.

Harry A. Stout ✠ Wenonah, N. J.; Jefferson Medical College of Philadelphia, 1886; member of the state board of medical examiners; aged 58; died, January 14, from heart disease.

Thomas A. Roy ✠ Mansura, La.; Louisville Medical College, Louisville, Ky., 1890; member of the state board of health; aged 56; died, January 24, from cerebral hemorrhage.

W. R. Owen, Los Angeles; Homeopathic Medical College of Missouri, St. Louis, 1877; former president Colorado State Board of Medical Examiners; aged 78; died, January 14.

James H. Wysong, Cleveland; Louisville Medical College, Louisville, Ky., 1880; Tulane University of Louisiana School of Medicine, New Orleans, 1886; aged 73; died, January 15.

Thomas T. Broyles, Jonesboro, Tenn.; University of Nashville Medical Department, Nashville, 1888; aged 81; died, December 18, at Embreeville, from carcinoma of the face.

Benjamin F. Few, Greer, S. C.; Medical College of the State of South Carolina, Charleston, 1861; Civil War veteran; also a druggist; aged 93; died, January 21, from senility.

William Pinkney Atchley, Knoxville, Tenn.; Tennessee Medical College, Knoxville, 1897; member of the Tennessee State Medical Association; aged 53; died, January 12.

Joseph A. Belanger ✠ Grosse Point, Mich.; University of Montreal Faculty of Medicine, Montreal, Que., Canada, 1895; aged 51; died suddenly, January 13, at Paris, France.

Charles N. Nolan, Nashville, Ind.; Pulte Medical College, Cincinnati, 1884; member of the Indiana State Medical Association; aged 63; died, January 22, from heart disease.

Edward Clarence Traver, Upton, Mass.; University of Vermont College of Medicine, Burlington, Vt., 1888; aged 56; died, December 23, from acute dilatation of the heart.

Robert A. Tate, Bolivar, Tenn.; Medical College of the State of South Carolina, Charleston, 1869; Confederate veteran; aged 78; died, January 12, from senility.

Charles McRae Morgan, Tucker, Ark.; College of Physicians and Surgeons, Chicago, 1903; formerly a medical missionary in Belgium; aged 50; died, January 14.

Joseph Ellwood Blanck, Green Lane, Pa.; Jefferson Medical College of Philadelphia, 1886; formerly member of the state legislature; aged 59; died, January 19.

Charles Pierce Bean, Boston; Bellevue Hospital Medical College, New York, 1891; member of the Massachusetts Medical Society; aged 58; died, January 12.

Horace Benjamin Coblentz, Washington, D. C.; University of Maryland School of Medicine, Baltimore, 1896; aged 51; died, January 24, from heart disease.

Waverly McGee Hume, Coalgate, Okla.; Medical Department University of Louisville, Louisville, Ky., 1884; aged 59; died, January 20, at Sherman, Texas.

Simon Willard Oley, Danbury, Conn.; New York Homeopathic Medical College, New York, 1886; aged 68; was found dead from heart disease, January 17.

George W. McKown, Osceola, Texas; Vanderbilt University Medical Department, Nashville, Tenn., 1883; aged 64; was shot and killed, January 11.

Edward W. Jones, Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1890; aged 60; died, January 27, from heart disease.

William F. Hazelton, Enid, Okla.; Eclectic Medical Institute, Cincinnati, 1873; aged 79; was found dead, December 31, from cerebral hemorrhage.

Joseph C. Egbert, Wayne, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1880; aged 69; died, January 17, from heart disease.

John L. Sowards, Greenup, Ky.; Kentucky School of Medicine, Louisville, 1891; aged 54; died, November 28, from chronic interstitial nephritis.

Wellington H. Willcox ✠ Columbus, Ohio; Ohio Medical University, Columbus, 1897; aged 52; died suddenly, January 18, from chronic nephritis.

George Humphrey Tichenor, Sr., New Orleans (licensed, years of practice); Civil War veteran; aged 85; died, January 14, from heart disease.

Godfrey M. Crowell, Hammonton, N. J.; Jefferson Medical College of Philadelphia, 1882; aged 66; died, January 26, from chronic nephritis.

Ernest Everett Lowry, Westerville, Ohio; Starling Medical College, Columbus, 1896; aged 55; died, January 17, from cerebral hemorrhage.

John Byron Sweet, Jewett City, Conn. (licensed, Connecticut, 1893); formerly member of the state legislature; aged 68, died, January 21, from beriberi.

Frederick L. Nisbet ✠ Meadville, Pa.; New York University Medical College, New York, 1887; aged 60; died, January 12, from erysipelas.

William Bennett Turnbow, Pittsville, Mo.; Eclectic Medical Institute, Cincinnati, 1891; aged 60; died, November 8, from heart disease.

James J. Wingard ✠ Lexington, S. C.; University of Virginia Department of Medicine, Charlottesville, 1895; aged 58; died, December 4.

John V. Albert, Pine Grove, Pa.; Jefferson Medical College of Philadelphia, 1870; aged 74; died, January 23, from heart disease.

Robert W. Bucke, Windsor, Ont., Canada; Western University Faculty of Medicine, London, 1905; aged 41; died, January 15.

Elizabeth H. Cassel, Berkeley, Calif.; Woman's Medical College, Chicago, 1883; aged 58; died, January 13, from heart disease.

Asa Adgate Arthur, Roxbury, Mass.; Bellevue Hospital Medical College, New York, 1865; aged 79; died, December 25.

William E. Duncan, Chicago; Rush Medical College, Chicago, 1881; aged 70; died, January 29, from pneumonia.

Frank Jesse Thorp, Rocky Mount, N. C.; Bellevue Hospital Medical College, New York, 1874; aged 70; died, January 13.

Sarah Helen Fitzbutler, Chicago; Louisville National Medical College, Louisville, Ky., 1892; aged 60; died, January 12.

William H. Blair, Erie, Pa.; Western Reserve University School of Medicine, Cleveland, 1873; aged 78; died, January 7.

Philip Angus Fox ✠ Milwaukee; Rush Medical College, Chicago, 1902; aged 43; died, January 30, from pneumonia.

E. James Blair, Los Angeles; Kentucky School of Medicine, Louisville, 1882; aged 63; died, January 9, from senility.

Edward Edwards ✠ Delphos, Ohio; Jefferson Medical College of Philadelphia, 1894; aged 63; died, January 21.

Correction.—Dr. W. A. Jones, formerly of Hamilton, Canada, writes to state that the obituary in the *Canadian Practitioner* for January from which a notice in THE JOURNAL was copied, was incorrect, since he is still among the living.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

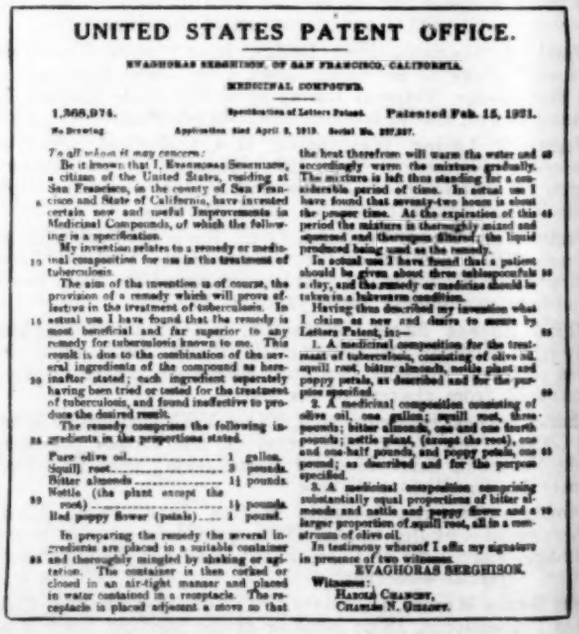
A PATENTED CONSUMPTION CURE

The United States Patent Office Again Demonstrates Its Ignorance of Modern Medicine

When the United States Patent Office issued a patent for a device to attach to the business end of the domestic hen, in order to mark with some identifying character, each egg as it is laid, it added to the gaiety of nations, but possibly did little harm. When it issued a patent for a special tapeworm trap that was to be baited and let down into the intestinal depths of the human economy, it demonstrated its conception of therapeutics. No, this is not written facetiously. The patents in question were actually issued; the former, No. 970,074, was granted Sept. 13, 1910, while the latter, No. 11,942, was issued Nov. 14, 1854.

SOME FREAK PATENTS

In February, 1796, the United States granted a patent to one Elisha Perkins for certain "metallic points to remove pain." Perkins' Tractors had their day; they flourished bravely on a wave of lay and medical credulity but in a few years were relegated by public indifference to the limbo of forgotten fads. In 1897 the United States Patent Office issued a patent (No. 587,237) to one Hercules Sanche for a preposterous piece of charlatanry that later became known as the Oxydonor. This piece of nickel-plated gas-pipe, which had no more therapeutic value than an empty tomato tin, had a



UNITED STATES PATENT OFFICE.

EVAGHORAS SERGHISON, OF SAN FRANCISCO, CALIFORNIA.

MEDICINAL COMPOUND.

1,366,974. Specification of Letters Patent. Patented Feb. 15, 1921.

No Drawing. Application filed April 3, 1919. Serial No. 287,337.

To all whom it may concern:

Be it known that I, EVAGHORAS SERGHISON, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Medicinal Compounds, of which the following is a specification.

My invention relates to a remedy or medicinal composition for use in the treatment of tuberculosis.

The aim of the invention is of course, the provision of a remedy which will prove effective in the treatment of tuberculosis. In actual use I have found that the remedy is most beneficial and far superior to any remedy for tuberculosis known to me. This result is due to the combination of the several ingredients of the compound as hereinafter stated; each ingredient seperately having been tried or tested for the treatment of tuberculosis, and found ineffective to produce the desired result.

The remedy comprises the following ingredients in the proportions stated.

Pure olive oil	1 gallon.
Squill root	3 pounds.
Bitter almonds	1½ pounds.
Nettle (the plant except the root)	½ pounds.
Red poppy flower (petals)	1 pound.

In preparing the remedy the several ingredients are placed in a suitable container and thoroughly mingled by shaking or agitation. The container is then corked or closed in an air-tight manner and placed in water contained in a receptacle. The receptacle is placed adjacent a stove so that the heat therefrom will warm the water and accordingly warm the mixture gradually. The mixture is left thus standing for a considerable period of time. In actual use I have found that seventy-two hours is about the proper time. At the expiration of this period the mixture is thoroughly mixed and squeezed and thereupon filtered, the liquid produced being used as the remedy.

In actual use I have found that a patient should be given about three tablespoonfuls a day, and the remedy or medicine should be taken in a lukewarm condition.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. A medicinal composition for the treatment of tuberculosis, consisting of olive oil, squill root, bitter almonds, nettle plant and poppy petals, as described and for the purpose specified.

2. A medicinal composition consisting of olive oil, one gallon; squill root, three pounds; bitter almonds, one and one fourth pounds; nettle plant, (except the root), one and one-half pounds, and poppy petals, one pound; as described and for the purpose specified.

3. A medicinal composition comprising substantially equal proportions of bitter almonds and nettle and poppy flower and a larger proportion of squill root, all in a menstruum of olive oil.

In testimony whereof I affix my signature in presence of two witnesses.

EVAGHORAS SERGHISON.

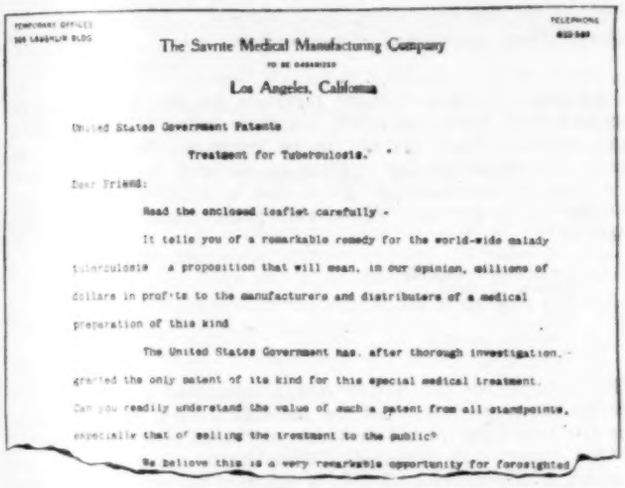
Witnesses:
HAROLD CRAWFORD,
CHARLES N. GRIMES.

Photographic reproduction (reduced) of the patent specification for Savrite, the alleged consumption cure.

world-wide sale among the gullible until 1915 when another branch of the United States Government declared the thing such an utter fraud that its transportation through the United States mails was barred. In 1900, the United States Patent Office granted a patent (No. 647,101) on a similar device (later called the Oxygenor) which also brought in easy money to its exploiters for some years until the fraud order department of the United States Post Office put it out of business.

In 1913 United States Patent No. 1,081,069 was granted on a preparation that, according to the specifications, would

confer immunity against diphtheria, pneumonia, scarlet fever, cerebrospinal meningitis, syphilis, goiter, tuberculosis and several other conditions. In 1917, U. S. Patent No. 1,212,888 was issued for a method of flavoring Epsom salts! If one wanted to go into the subject more thoroughly it would be easy to show that the Patent Office has issued patents for many preparations to be used in medicine for which there has been not the slightest scientific justification.



The Savrite Medical Manufacturing Company

Los Angeles, California

United States Government Patents

Treatment for Tuberculosis.

Dear Friend:

Read the enclosed leaflet carefully -

It tells you of a remarkable remedy for the world-wide malady tuberculosis - a proposition that will mean, in our opinion, millions of dollars in profits to the manufacturers and distributers of a medical preparation of this kind

The United States Government has, after thorough investigation, granted the only patent of its kind for this special medical treatment.

Can you readily understand the value of such a patent from all standpoints, especially that of selling the treatment to the public?

We believe this is a very remarkable opportunity for foresighted

Photographic reproduction (reduced) of the opening paragraphs of a form letter sent out by the Savrite Medical Manufacturing Company in an attempt to get capital to float the "consumption cure." Note the way in which the United States patent is capitalized.

PATENTING A "CONSUMPTION CURE"

The most recent and flagrant example of lack of intelligent patent law administration is to be found in a case recently brought to the attention of THE JOURNAL. The Savrite Medical Manufacturing Company, Los Angeles, California, has recently circularized the public in an attempt to get money to manufacture "Savrite," an alleged cure for tuberculosis. The talking point of those who are soliciting subscriptions for this purpose—but let them speak for themselves:

"The United States Government has issued the patent on this compound ONLY after thorough investigation, and it is the only patent ever granted in the United States for a preparation in liquid form, ESPECIALLY as a remedy for Tuberculosis."

According to the prospectus, the preparation was "invented" by one Serghison, an alleged sufferer from tuberculosis and one who, it is needless to say, had been "given up entirely by prominent physicians as incurable" but who took his own remedy and "was completely cured of the disease." To quote:

"The inventor of 'Savrite' has discovered what he has proven to be a specific remedy for Tuberculosis. To countless thousands this 'Medical Marvel' will prove a veritable Godsend once its wonderful work becomes known.

"The inventor has tried and tested the Remedy in many cases.

"HE HAS NEVER YET HAD A FAILURE."

We learn, too, that an "eminent physician" stands sponsor for the preparation. Thus:

"The eminent physician, William Kingston Vance, M.D., has used the remedy successfully. This physician has given a sworn affidavit as proof positive that the Serghison treatment for tuberculosis is a success and has curative effects."

The only William Kingston Vance whose name appears in our records lives at Fresno, Calif. He was born in 1852 and was graduated by Bennett College of Eclectic Medicine and Surgery in 1887. His "eminence" has, evidently, been conferred by the Savrite Medical Mfg. Co., as a rather careful search of medical literature and other sources of information fails to disclose that he has any other claim to note. The only record in our files regarding this man occurs in clippings from Fresno and other California newspapers of last November alleging that the federal authorities charged William Kingston Vance with the illegal prescribing of liquor.

The patent for Savrite is No. 1,368,974 issued Feb. 15, 1921, to one Evaghoras Serghison of San Francisco. The "invention," according to the patent specifications, lies in providing "a remedy which will prove effective in the treatment of tuberculosis" and the patentee considers the remedy "most beneficial and far superior to any remedy for tuberculosis known to me."

What is this "Medical Marvel" that produces cures in tuberculosis and has "never yet had a failure"? Let the specifications issued by the United States Patent Office, answer:

"Pure olive oil	1 gallon
"Squill root	3 pounds
"Bitter almonds	1¼ pounds
"Nettle (the plant except the root)	1½ pounds
"Red poppy flower (petals)	1 pound"

These various ingredients are to be mixed, put into a closed container, gradually warmed and left standing for about seventy-two hours. At the end of this time the mixture is squeezed, mixed and filtered; the filtrate comprises the "cure"! The dose, we are told, is "about three tablespoonfuls a day" to be taken in a lukewarm condition.

QUESTIONS FOR THE PATENT OFFICE

On Jan. 6, 1923, THE JOURNAL submitted the following questions to the Commissioner of Patents relative to the granting of this particular patent:

1. What evidence was submitted to the Patent Office of the therapeutic usefulness of this alleged "new and useful Improvements in Medicinal Compounds"?
2. Which one of the forty-odd genera or five hundred species of "nettle" is referred to in this patent?
3. Does the Patent Office consider that the specifications in this patent are sufficiently definite and specific to make it possible on the expiration of the patent for the public to duplicate the product described by the patentee?
4. Was this formula for an alleged effective treatment of tuberculosis submitted to any department of the government that might be expected to have some knowledge of therapeutics?
5. What consideration was the public health given in this matter?

The Commissioner was told that THE JOURNAL would appreciate hearing from him on these points. This was more than a month ago. At the time of going to press (February 7) no reply has been received.

Correspondence

"THE CARE AND FEEDING OF INFANTS"

To the Editor:—The prevention of the initial loss of weight during the first week of extra-uterine life by the administration of sugar solution has been mentioned by the writer of the valuable series of papers on the care and feeding of infants (THE JOURNAL, January 13, p. 109), and credited to Schick. Dr. Charles Herrman, in a later issue (January 27, p. 273), claims priority, showing that in 1915 he published a paper in which he reported that the initial loss of weight may be prevented by the administration of a 10 per cent. solution of lactose every three hours. With a view of saving valuable space from further priority claims, may I intrude with the following facts drawn from ethnology, a field far removed from pediatrics, yet offering at times sound suggestions to those engaged in the care of infants, to the same extent as the Peruvian Indians offered a remedy to malarial patients, and an old woman in Shropshire, England, suggested to Withering digitalis, the best remedy we have for heart failure.

The administration of sugar or of substances containing sugar to infants during the first few days of extra-uterine

life is very widespread among primitive, barbarous and civilized peoples. Many primitive tribes do not permit their new-born infants to take the breast for from two to five days after birth, and feed them with substances containing sugar, such as honey, coconut milk, fruit juices and sugar cane. This is the case among the natives of Samoa, who feed their new-born coconut or sugar cane, which is first well masticated by the mother and then directly transmitted to the infant's mouth (Turner, Samoa, p. 81). Likewise, the natives of Vitis in East Africa give their new-born the juice of sugar cane during the first three days of life. The inhabitants of the Fiji archipelago, too, have the same custom, according to Ploss (Das Kind, Ed. 3, 1911, **1**:458), who quotes many authorities as to numerous other primitive races who feed their new-born with honey, sugar, and the like.

According to Susruta (Susruta Ayurvedas, Ed. Hessler **2**:43), the new-born infant in ancient India was not given the breast, but was made to take honey, butter and various plants containing sugar for three or four days. Ploss also found that honey was given by ancient Aryan tribes in India to their new-born infants. The Romans, too, thus fed their infants during the first week of life. Soranus of Ephesus, a Greek physician who practiced in Rome during the second century A. D., and who wrote a noteworthy treatise on the care and feeding of infants, insisted that it is best to place the new-born at the mother's breast, and that the administration of sweets, particularly honey, is harmful; which goes to show that this custom was prevalent in ancient Rome. Many writers have mentioned that the Persians have been in the habit of giving new-born babies honey over a period of several days.

Among the inhabitants of eastern Europe today the administration of sugar solution to new-born infants during the first week is routine. This can be seen among the Slavonians of southeastern Europe, and the Hungarians, Serbians, Letts, Esthonians, Poles and Russians. The immigrants in this country derived from these regions of Europe have been giving sugar solution to their new-born, and they say that it is best for the nutrition of their babies. They do it because their ancestors have found it useful for generations.

MAURICE FISHBERG, M.D., New York.

"INTESTINAL WORMS AND APPENDICITIS"

To the Editor:—In the editorial, January 27, on "Intestinal Worms and Appendicitis," this statement occurs: "It has been objected that very few of the thousands of appendixes removed are reported to contain parasites." F. K. Noack is quoted as having found nine appendixes out of fifteen infested; the work was evidently done on European patients. It may not be amiss to supplement the editorial with the following note: I recently dissected ninety-six appendixes removed at operation with the express purpose of obtaining some definite percentage figures as to parasitic infestation of the organ. Four of the ninety-six, or 4.16 per cent., harbored *Oxyuris vermicularis.* The infestation varied widely. The most lightly infested appendix had one large adult female; the most heavily infested had twenty-five worms—larvae, adult males and females. Histologically, the organs showed an acute or subacute inflammation, with many polymorphonuclear leukocytes and a few to numerous eosinophils. No other species of worms were found. While it was impossible to obtain histories, all of these were presumably from Minnesota. Incidentally, only one appendix showed a foreign body (other than soft fecal matter). In this case the organ contained two raspberry seeds.

L. N. GARLOUGH, St. Paul.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

TREATMENT OF SCABIES

To the Editor:—What is considered the best, quickest and most efficient treatment for scabies? Please omit my name.

R. A. L., Illinois.

ANSWER.—Various radical methods for the rapid cure of scabies have been suggested, but their value is questionable, and certainly they are not to be recommended for general use. The treatment for scabies as outlined in any standard textbook of dermatology gives one a reliable and efficient method of treatment. A suitable prescription for use consists of:

	Gm.	or	C.c.
Precipitated sulphur Balsam of Peru Soft soap, U. S. P.	āā	2	3 ss
Zinc oxid Prepared calamine	āā	2	5 gr. xl
Petrolatum	ad	30	3 i

The strength of the active drugs contained can be varied to suit the requirements of the individual case, being reduced for the treatment of children, or increased when necessary.

One thing that frequently complicates the treatment of scabies is the development of a sulphur dermatitis. Failure to recognize this complication often leads to the institution of more vigorous treatment, with unsatisfying results. When such dermatitis develops, the striking nocturnal character of the itching is usually lost. The eruption present consists of diffuse patches of dermatitis developing in sites not particularly involved by the scabies itself. With proper recognition of this complication, treatment of scabies is usually eminently satisfactory if conducted along the lines indicated in the dermatologic textbooks.

ARTICLES ON GRANULOMA INGUINALE

To the Editor:—I would be very glad to have a list of leading original articles in English on granuloma inguinale.

C. C. WILEY, M.D., Birmingham, Ala.

ANSWER.—

Ross, C. F.: Granuloma Inguinale, *Virginia M. Month.* **48**: 579 (Jan.) 1922.

Morrissey, P. G.: Granuloma Inguinale, *J. Tennessee M. A.* **15**: 105 (June) 1922.

Parounagian, M. B., and Goodman, Herman: Ulcerating Granuloma (Granuloma Inguinale): Report of a Rare Example, *Arch. Dermat. & Syph.* **5**: 597 (May) 1922.

Randall, A.; Small, J. C., and Belk, W. P.: Granuloma Inguinale, *Surg., Gynec. & Obst.* **34**: 717 (June) 1922.

Beeson, B. B.: Granuloma Inguinale with Lesion on Lower Lip, *Arch. Dermat. & Syph.* **6**: 342 (Sept.) 1922.

Goodman, Herman: Ulcerating Granuloma of Pudenda, *Arch. Dermat. & Syph.* **1**: 151 (Feb.) 1920; Ulcerating Granuloma (Granuloma Inguinale), THE JOURNAL, Sept. 2, 1922, p. 815.

Aragão, H. de B.: Granuloma Venereum, *New Orleans M. & S. J.* **70**: 369 (Oct.) 1917.

Pardo, V.: Ulcerating Granuloma of Pudenda, *J. Cutan. Dis.* **36**: 206 (April) 1918.

Campbell, M. F.: Granuloma Inguinale, THE JOURNAL, March 5, 1921, p. 648.

Lynch, K. M.: Granuloma Inguinale, THE JOURNAL, Sept. 17, 1921, p. 925.

Symmers, Douglas, and Frost, A. C.: Granuloma Inguinale in the United States, THE JOURNAL, May 8, 1920, p. 1304.

Walker, E. L.: Etiology of Granuloma Inguinale, *J. M. Res.* **37**: 427 (Jan.) 1918.

Friedlander, D.: Granuloma Inguinale Tropicum, *California State J. Med.*, April, 1913.

Gruidon, J.: Granuloma Inguinale Tropicum: Report of Three Cases, *J. Cutan. Dis.*, April, 1913.

DEFINITION OF MAJOR OPERATION

Supplementary to the reply published January 20, the medical practice law for Ohio, Section 1288, as amended in 1917, thus defines major surgery:

Neither shall the certificate permit the holder to perform major surgery, which is hereby declared to be all operative procedures requiring the use of the knife or other surgical instruments for the opening of any natural cavity of the body or the amputation of any member or part of the body. Such certificates may be refused, revoked or suspended as in the case of certificates to physicians and surgeons.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALASKA: Juneau, March 6. Sec., Dr. Harry C. De Vighne, Juneau.
KANSAS: Topeka, Feb. 13. Sec., Dr. Albert S. Ross, Sabetha.
NATIONAL BOARD OF MEDICAL EXAMINERS: Written examination in Class A medical schools. Part I and II, February 12-14 and February 15-16. Sec., Dr. John S. Rodman, 1310 Medical Arts Bldg., Philadelphia. Application for the February examination must be sent in by January 1.
MAINE: Portland, March 13-14. Act. Sec., Dr. Adam P. Leighton, 192 State St., Portland.
NEW HAMPSHIRE: Concord, March 9-10. Sec., Dr. Charles Duncan, Concord.
VERMONT: Burlington, Feb. 13. Sec., Dr. W. Scott Nay, Underhill.

Hawaii October Examination

Dr. G. C. Milnor, secretary, Hawaii Board of Medical Examiners, reports the written examination held at Honolulu, Oct. 9-12, 1922. The examination covered 10 subjects and included 50 question. An average of 75 per cent. was required to pass. Of the 6 candidates examined, 5 passed and 1 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Georgia		(1914)	80
St. Louis University School of Medicine		(1906)	91
University of Pennsylvania		(1922)	84, 88
Kumamota Special Medical School		(1915)*	75
	FAILED		
Tokyo Charity Hospital Special Medical School		(1916)*	62

* Graduation not verified.

Nevada November Examination

Dr. Simeon L. Lee, secretary, Nevada State Board of Medical Examiners, reports the written examination held at Carson City, Nov. 6-8, 1922. The examination covered 13 subjects and included 100 questions. An average of 75 per cent. was required to pass. Eight candidates were examined, all of whom passed. Ten candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
College of Physicians and Surgeons, San Francisco		(1904)	82
Howard University		(1904)	81.9
College of Physicians and Surgeons, Keokuk		(1896)	83.5
Detroit College of Medicine and Surgery		(1896)	78.9
Kansas City College of Medicine and Surgery		(1922)	83.9
Kansas City University of Physicians and Surgeons		(1922)	77.7
University and Bellevue Hospital Medical College		(1903)	89.7
Nagasaki Special Medical School		(1922)*	84.8

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Los Angeles		(1917)	California
University of California Medical School		(1919), (1922)	California
Illinois Medical College		(1903)	Illinois
Loyola University		(1919)	Idaho
Rush Medical College		(1882)	California
Medical School of Maine		(1908)	Maine
Barnes Medical College		(1903)	Missouri
Jefferson Medical College		(1891)	Penna.
Texas Christian University		(1914)	Texas

* Graduation not verified.

Utah November Examination

Mr. J. T. Hammond, director, Department of Registration of Utah, reports the written examination held at Salt Lake City, Nov. 23, 1922. The examination covered 10 subjects and included 100 questions. An average of 75 per cent. was required to pass. Four candidates were examined, all of whom passed. Five candidates were licensed by reciprocity, and one candidate received an osteopath license by reciprocity. One candidate was licensed on government credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Maryland		(1922)	82.7
Creighton University		(1921)	77.2
Jefferson Medical College		(1921)	84.8
University of Pennsylvania		(1920)	84.2

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Northwestern University		(1921)	California
Harvard University		(1920)	Ohio
Columbia University		(1920, 2)	New York
Jefferson Medical College		(1916)	Penna.
Osteopath			Missouri

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
University of Michigan Medical School		(1910)	U. S. Navy

Book Notices

ANIMAL PARASITES AND HUMAN DISEASE. By Asa C. Chandler, M.S., Ph.D., Instructor in Biology, Rice Institute, Houston. Second edition. Cloth. Price, $4.50. Pp. 572, with 254 illustrations. New York: John Wiley & Sons, Inc., 1922.

The discoveries mentioned in this outline of parasitic diseases are only a few of the more conspicuous milestones on the path of progress of modern medicine as related to animal parasites. A dry subject has been made interesting, and, at times, amusing. Chandler says, "Potton and Craig found the inside of a hat in which a kitten had slept overnight so full of flea eggs that it looked as if it had had sugar sprinkled in it from a sifter." The necessity for intravenous injections of quinin in certain cases of malaria, as against oral administration, is emphasized by saying, "Many a man has died with enough quinin in his stomach to have saved his life had it been properly given." The subject matter lends itself well to striking statements. Language is seldom more forceful than this: "According to the writer's investigations, the sausage which was the cause of a recent epidemic in Portland, Oregon, contained over 2,000,000 larvae (of trichina worms) to the pound at a very conservative estimate, and in a bit of human muscle from the diaphragm of an Italian who fell victim to the disease the number of worms was even greater." The author's choice of words is poor, however, when he says, "In 1905 Schaudinn discovered *Spirochaeta pallida*, which is believed to cause the disease." Some might infer, unless better informed, that Schaudinn's work in discovering the cause of syphilis had never been confirmed. The author does not hesitate to say, in the case of yellow fever, "The organism causing the disease was discovered by Noguchi at Guayaquil in 1918, and was found to be a spirochete-like organism closely related to, and very closely resembling the spirochete of infectious jaundice." As a matter of fact, doubt still exists concerning the cause of yellow fever, but none whatever concerning the cause of syphilis. The illustrations are almost all pen and ink drawings by the author from specimens or from illustrations of other authors, and are well adapted to the text.

CLINICAL AND OPERATIVE GYNÆCOLOGY. By J. M. Munro Kerr, Professor of Obstetrics and Gynæcology, Glasgow University (Muirhead Chair). Cloth. Price, $15. Pp. 832, with illustrations. New York: Oxford University Press, 1922.

It is rare to take up a book wherein one agrees with so much and dissents from so little. Kerr presents the subject of gynecology in a clear, well drawn and comprehensive picture. He shows the anatomy, the physiology and the pathology adequately in the foreground, and then with coherent thought and lucid expression he opens up the perspective in an orderly and methodical progression. The clarity of the picture is greatly enhanced by the occasional summaries, the frequent cross references, and especially by the cases taken from the author's experience wherein success and failure find equal representation and emphasis. The volume is just as desirable for the student and practitioner as for the specialist; but the specialist who combines gynecology with obstetrics will find it invaluable. The interdependence of the two arts is everywhere recognized and accentuated. It is refreshing to meet the honest statement that an entire absence of lacerations will be found in no more than 15 per cent. of primiparas, as well as the opinion, so slow to win credence, that salpingitis arises from gonorrheal and puerperal infections in the proportion of about 2 to 3, respectively. The tendency has been to give about 70 per cent. of primiparas an intact introitus, and to regard virtually all tubal infections as gonorrheal. We are delighted also to have modern authority in support of more conservative treatment of retropositions. In these days of furious knife-whetting it is a novel comfort to encounter an eminent technician who is willing to try at first such old, undramatic, but none the less valuable agents as pessaries. Fabre himself could not show a more scientific approach to his problem, than Kerr. Thorough asepsis is inculcated and insisted on, not only for operative interferences but also for vaginal examinations.

The latter injunction ought to be unnecessary; but who of us has not shuddered with disgust as an intern or a practitioner begins to paw over a clean woman with his hands unwashed? The maneuver not only is a violation of surgical laws and a repellent ordeal for the patient, but it is a serious reflection on the rearing, refinement and training of the examiner. It may seem invidious in so large and so excellent an accomplishment to mention technical activities which differ from ours. The wonder is that the occasions are so few. We wish the author had made it plainer that he shaves the vulva in his operative preparations. We almost fear that he omits this invaluable procedure at times. His use of the intra-uterine douche in saprophytic and septic conditions of the uterus is at variance with the custom here. Practically all disturbance of the endometrium has been abandoned except in cases in which the presence of a putrid remnant in the cavity is well assured. Hysterectomy for acute peritonitis also is never done for the reason that the operation can rarely be undertaken before the septic agents have passed the walls of the uterus and entered regions inaccessible to the knife. In puerperal cases, as the author very well shows, the bacteria spread along the lymphatics rather than by contiguity, and therefore enter the peritoneal cavity (hence the peritonitis) before the infection is definitely recognized. We must question, too, the author's faith in superfetation. The chapters on venereal diseases, nervous disorders, the development of the reproductive organs, anesthesia and the technic of transfusion have been done most acceptably by associates of the author. These valuable and pertinent contributions could not well be spared. The illustrations of the operative maneuvers are unusually welcome in their clearness and comprehensibility. The veriest tyro could scarcely go astray in the presence of such fine and elaborately detailed charts. The author's opinions have the definition which come from the shrewd interpretation of his abundant material. The book is printed in the best English manner; it is large, but complete; there is no excess. The style is unusually simple and clear, and over it all, text and plan, comment and illustration, is felt the wide culture, the scholarly background, the trained mind and the dominant personality of its author.

DIATHERMIE ET DIATHERMOTHERAPIE. Par le Dr. H. Bordier, Professeur Agrégé a la Faculté de Médecine de Lyon. Préface de M. Le Professeur Bergonié. Correspondant de L'Institut (Académie des Sciences). Paper. Price, 30 francs. Pp. 481, with 137 illustrations. Paris: Librairie J. B. Baillière et Fils, 1922.

This publication evidently originated in the demand for a textbook on diathermy in the French language. The theoretical part seems to contain a superabundance of electrotechnical details and formulas. Of value for the appreciation of electrocoagulation is its comparison with the results gleaned by the actual cautery, and the demonstration of the technical superiority of this method over the Paquelin cautery and the galvanocautery. To the surgical use of electrocoagulation, considerable space is devoted; the different electrodes are shown in pictures, and the administration is discussed according to the various parts of the anatomy and the nature of the pathologic changes. This is also true of the form of discussion of the application of the so-called medical diathermy, the raising of the temperature of the structure of the body without transgressing the physiologic limit. The illustrations do not come up to the standard laid down by American medical textbooks and periodicals.

INNERE SEKRETION. Ihre physiologischen Grundlagen und ihre Bedeutung für die Pathologie. Band I. Von Prof. Dr. Artur Biedl, Vorstand des Institutes für allgemeine und experim. Pathologie und der propädeutischen Klinik an der deutschen Universität in Prag. Fourth edition. Band III: Literatur. Paper. Price, 540 marks, each. Berlin: Urban & Schwarzenberg, 1922.

The war and its sequels has delayed the appearance of the fourth edition of this standard work, and we have as yet only the first part of the first volume. Of this, a considerable portion is given over to general considerations, especially to methods of investigation. Only the parathyroid system receives detailed consideration, but the exhaustive character of the work is shown by the fact that more than 200 pages are given to these structures. No marked changes from the previous editions of the work are to be noted. It is the most painstaking, exact compilation of existing literature on the ductless glands that we have, and is an indispensable source of information to any one studying this field. Probably it would be more useful, and certainly it would be more interesting, if the author's own convictions were more clearly and succinctly indicated. Despite the obstacles to international communication that have existed for several years, non-Teutonic literature has been considered, and all but the most recent American work seems to have been discussed. Among works on the organs of internal secretions, Biedl's handbook is noteworthy for its unemotional objectivity and scientific soundness; speculation is absent, and there is little encouragement for the practitioners of what Marine has aptly termed "endocriminology."

Volume III is a bibliography of the subject of internal secretions, and comprises 480 pages. Although it makes no pretense of being complete, it does list most of the important publications on the subject during the last fifty years.

BACTERIOLOGIC STUDIES. I. Review of Recent Work on Pneumococci. By A. Eastwood, M.D. II. Types of Pneumococci. By F. Griffith, M.B. III. Serological Differences Amongst Pneumococci. By A. Eastwood, M.D. IV. Distribution and Serological Characters of Influenza Bacilli. By W. M. Scott, M.D. Ministry of Health Reports on Public Health and Medical Subjects, No. 13. Paper. Price, 2 shillings, 6 pence net. Pp. 89. London: His Majesty's Stationery Office, 1922.

These studies comprise four papers on subjects connected with respiratory disease. 1. A review of recent work on pneumonia (eighteen pages) by Eastwood, which is primarily a survey of the question of serologic races among pneumococci. The problem of pneumococcus types is well outlined in this article. 2. A laboratory study (twenty-five pages) by Griffith of types of pneumococci obtained from cases of lobar pneumonia in man, mostly in the London area. The conclusion is reached that the American Types I, II and III are serologically distinct and occur in cases of lobar pneumonia in England in almost the same proportion as in the United States. 3. A discussion (thirty pages) by Eastwood of the significance of serologic differences among pneumococci, at the end of which the author expresses his belief that Neufeld's views about the significance of serologic differences among pneumococci ought not to be accepted as final. 4. A summary (fourteen pages) by Scott of observations on the distribution and serologic character of influenza bacilli, from which the author concludes that the serologic diversity of influenza bacilli cannot be used as an argument either in favor of or against their etiologic relationship to influenza. Although the observations reported are not very novel and the critical discussions not remarkably illuminating, the paper will be found useful by those interested in the investigation of respiratory disease.

LECTURES ON DIETETICS. By Max Einhorn, M.D., Visiting Physician to the Lenox Hill Hospital. Cloth. Price, $2.25 net. Pp. 244, with 8 illustrations. Philadelphia: W. B. Saunders Company, 1922.

The author presents in simple language some common sense observations on the principles of diet and on the physiology of digestion. Dr. Einhorn is an apostle of normalcy. He is against fads of all kinds, against eating fast or slowly, against vegetarianism and high meat diets, against too many meals or too few. He is for adopting the diet commonly followed by the large majority of persons with some attention to those elementary principles of nutrition that physiology has incontrovertibly proved to have a place. In addition to the diet in health, special chapters concern such diseases as diabetes and gout, in which diet is an especially important factor. Dr. Einhorn has succeeded in including a large amount of material in small compass and in an unusually readable form.

NUTRITIONAL PHYSIOLOGY. By Percy Goldthwait Stiles, Assistant Professor of Physiology in Harvard University. Fourth edition. Cloth. Price, $2 net. Pp. 300, with 22 illustrations. Philadelphia: W. B. Saunders Company, 1922.

In this work the author presents an account of the processes of digestion, with special consideration of the lessons learned by the war and by studies carried out in nutritional research in many institutions. The book is exceedingly well written; it has a social as well as a scientific point of view, and it should be of interest to the lay as well as to the medical reader.

Miscellany

EDWARD JENNER: 1749-1823

Edward Jenner, who died a hundred years ago, will ever be remembered as the conqueror of smallpox. Born in 1749 at Berkeley, Gloucestershire, England, the son of a minister, he decided at the age of 13 to study medicine, and was apprenticed by his father to the Drs. Ludlow at Sodbury, with whom he remained six years. It was during his apprenticeship that a patient said when smallpox was mentioned, "I cannot take it, for I have had cowpox." This remark was not forgotten by Jenner. Attaining his majority, Jenner went to London, where he became a house pupil with John Hunter. He often discussed smallpox with the great anatomist, and once expressed a hope of being able to substitute vaccination for inoculation, to which Hunter characteristically replied: "Don't think, Jenner, but try." Tiring of city life, he returned to his native village and settled down as a country practitioner. By this time he had reached the conclusion that the "grease" of horses, cowpox and smallpox were the same disease. He made a drawing of the hand of a milkmaid with cowpox which he took to London, where his theory was beginning to be discussed in medical circles. In 1796, cowpox broke out on a farm near Berkeley, and Jenner seized the opportunity to put his theories to a test. He took pus from the hand of Sarah Neames, a dairy maid, who had contracted the disease, and inserted it through superficial incisions into the arm of James Phipps, a robust lad about 8 years of age. The vaccination was successful, and the result was very similar to that produced by inoculation with smallpox itself. Six weeks later, Jenner inoculated this boy with variolous matter, and was delighted to see that the lad did not contract the disease. When cowpox broke out again the following year, Jenner repeated his experiment successfully on three other persons. He then prepared a paper on the work he had done, and transmitted it to the Royal Society for publication. The council returned the manuscript, however, believing, apparently, that the evidence was insufficient to warrant publication in their transactions. Jenner resolved to publish the paper himself, and it was printed in 1798 as a pamphlet entitled: "Inquiry Into the Causes and Effects of Variolae Vaccinae, a Disease Discovered in Some of the Western Counties of England, Particularly Gloucestershire, and Known by the Name of the Cow Pox."

While in London to attend to the publication of his pamphlet, Jenner called on a Dr. Cline, with whom he left some cowpox virus for trial. Cline vaccinated one of his patients successfully, and later inoculated him in three different places with smallpox, with negative results. He therefore confirmed Jenner's work, and wrote, "I think the substitution of cowpox poison for smallpox promises to be one of the greatest improvements that has ever been made in medicine."

The leading scientific and medical men in London were now discussing vaccination. Several questioned the accuracy of Jenner's observations. Ingenhouz, a well known physician and scientist, opposed the cowpox theory, and cited several cases in which smallpox had been contracted after inoculation with cowpox. Others, such as Pearson and Woodville, adopted Jenner's ideas, but endeavored to exploit them on lines of their own. Jenner returned to London to rescue his discovery from destruction, to find that Pearson had opened an institute of his own for the inoculation of cowpox, in which Jenner refused to accept the offer of a prominent position. Jenner returned again to his native village to complete and publish his second paper: "A Continuation of Facts and Observations Relative to the Variolae Vaccinae."

Vaccination was soon introduced in America by Dr. Waterhouse of Cambridge, Mass., who vaccinated the members of his family, and then inoculated them with smallpox to demonstrate his faith in the procedure and to assist in showing the public the protection it affords. France, Spain, Austria, Italy and Switzerland accepted vaccination eagerly. Spain dispatched an expedition in 1803 to all her possessions in the Old and New worlds to introduce vaccination and to check epidemics of smallpox, which were raging. Twenty-two children were taken along on this voyage in order to preserve the vaccine by passing it from arm to arm. Napoleon, in 1805, ordered all of his soldiers who had not had the smallpox to be vaccinated. The empress of Russia ordered that the first child who submitted to the operation be named "Vaccinoff," and that it be educated at public expense. Jenner's influence was so great that the king of Spain and the emperor of Austria released English prisoners of war at his request. The Royal Jennerian Society was formed, and a grant of £10,000 was bestowed by Parliament.

Notwithstanding the success and support that vaccination received throughout the world, there were many influential persons who still opposed the practice, and pamphlets, lampoons and caricatures were constantly published about its discoverer. Antivaccinationists claimed that various "beastly" diseases common to cattle appeared among the people since vaccination was introduced. A writer quoted a woman who said that since her daughter was vaccinated "she coughed like a cow and has grown hairy over her body." Another said that vaccination had been discontinued in his part of the country because the people who had been vaccinated "bellowed like bulls."

Notwithstanding the most bitter attacks, Jenner was elected a member of nearly all the leading scientific societies of Europe, and was presented with the freedom of Dublin, Edinburgh, London and Glasgow. The Medical Society of London conferred on him a gold medal, and he was granted diplomas from all parts of the world.

A fresh outburst of criticism occurred in 1810 which greatly unnerved and aged Edward Jenner. His life was further saddened by the loss of his wife and son in 1815. At that time he retired to Berkeley, which he did not leave again, except for a day or two, until his death. He wrote in his last letter to his friend Gardner, Jan. 23, 1823: "I have had an attack from a quarter I did not expect, the Edinburgh *Review*. These people understand literature better than physic, but it will do incalculable mischief. I put it down at 100,000 deaths at least. Never was I involved in so many perplexities." The following day he retired in usual health, but was stricken the next morning with apoplexy. He never rallied, and died, January 26.

The principles which Edward Jenner advocated and practiced still remain the one efficient means of protection against smallpox. The most eloquent tribute to his memory are the lives that his discovery has saved.

DEFINING A MISDEMEANOR

It costs only $400 to be party to a murder in Chicago. Anyhow, that is all it cost Frank S. Reed of 5724 South State Street, as the following briefly recapitulated facts taken from the record of the trial in Judge Adams' court will show.

First, we will have to explain that Mr. Reed, or, as he sometimes styled himself, Dr. Reed, was on trial in the court named on two charges. First, for failure to report a contagious disease as the city ordinances require, and, next, for practicing medicine without a license.

On the evening of November 23, according to Reed's own testimony, he was called to see Herbert Cherry, whose parents reside at 5617 South State Street, and was informed that the little fellow had a sore throat and had been complaining for a day or two. After manipulating the vertebrae in the child's neck so that he would open his mouth, Mr. Reed made a brief examination, but prescribed no further treatment. He explained to the court, however, that he noticed that the throat was inflamed and there was a yellow spot on one side, but told the parents to call him in case the child got worse.

According to the testimony of Dr. C. D. Trice, a practicing physician in that neighborhood, who was called in by the family two days later, the child rapidly grew worse, and when Dr. Trice arrived was in a semiconscious state and died two hours later. Dr. Trice diagnosed the case as diphtheria, and promptly reported it; also he stated that, according to his best judgment, the case had been running for several days.

Before the case was called in court, "Dr." Reed, in a statement made to Dr. Spalding, chief of the Medical Bureau in the Department of Health, stated he suspected the child had diphtheria and that he manipulated the vertebrae on the back of the neck for the reason that such manipulation tended to control diseases of the throat. He also stated that he did not report the case, that the parents did not recall him, and he heard no more about the case. "Dr." Reed further stated that he was a licensed embalmer and under that license he had been treating cases in this way for the last six months.

It was also disclosed in the testimony that the sign on Reed's office door read "Doctor Frank S. Reed, Chiropractor," but after his interview with Dr. Spalding of the Department of Health, he had removed the word "Doctor," leaving the remaining part of the sign as it was. . . .

The attorney for the defendant entered a plea for leniency on the ground that his client had been perfectly frank and truthful in the statements he had made to the court. This plea, however, the court ignored and in passing sentence said: "This defendant had no business there at all. He is fined $200 and costs on each charge, making a total of $400 and costs." Then turning to the defendant, the court said: "You lock up your business and go out to the stockyards and get a job where you belong."—*Bulletin, Chicago School of Sanitary Instruction.*

Medicolegal

Request for Services for Injured Child

(Fruin v. Glassnap (Conn.), 117 Atl. R. 547)

The Supreme Court of Errors of Connecticut, in setting aside a judgment obtained by the plaintiff, and ordering a new trial, does so on the ground that the charge to the jury was inadequate and prejudicial to the defendant. The court says that the plaintiff offered evidence to prove that a child was injured by an auto truck driven by the defendant, and was carried by a third person into the office of the plaintiff, and left in his care. The plaintiff immediately administered first aid to the child, and by examination discovered that she was seriously injured and would have to be confined in a hospital for eight or ten weeks and receive constant medical attendance. Soon afterward, the defendant came into the office and the plaintiff told him these facts, and that treatment of the child would entail expense; that he should like to know by whom he would be paid, and asked the defendant if he wanted him to take the case. The defendant answered that he did, and told the plaintiff to go on with the treatment. He then gave him $10 to cover the expense of a roentgenogram, telling the plaintiff to credit the remainder, if any, on his bill for services. On the other hand, the defendant denied that he had any conversation with the plaintiff concerning payment for services rendered or to be rendered to the child by the plaintiff, and denied that he had paid the plaintiff any money. He offered no other evidence to contradict the evidence offered by the plaintiff. It was admitted that the defendant stood in no relationship to the injured child which put an obligation on him to furnish her with necessary medical care. On this evidence, under proper instructions, the jury could reasonably find the issues for the plaintiff. Therefore the trial court committed no error in denying the defendant's motion to set aside the verdict

In the conditions in which these parties stood, the burden rested on the plaintiff to prove, either an express promise by the defendant to pay the plaintiff for his services, or circumstances or language from which his promise to pay might fairly be implied from the request he made. A simple request would not fix liability on the defendant, because he was in no relationship to the injured child which bound him to supply her with necessary surgical treatment. It must appear that by something said or done that obligation was put on him. From the evidence relating to the conversation between the parties, and the time and circumstances in which it took place, and also to the payment of $10 on account, it might reasonably be found either that the defendant made an express promise to employ and pay the plaintiff for his services, or that he made a request of the plaintiff for his services which implied a promise to pay for them. But, as to the difference between these alternatives, the trial court did not sufficiently instruct the jury. It did not define an express promise or an implied promise. It said nothing about a request from which a promise might legally be implied. Its repetition of the words "request or promise" was so insistent that the jury must have been impressed with the belief that a mere request of the defendant, without a promise of any kind, would be sufficient to hold him liable to pay for the plaintiff's services. That is not the law. In this particular, also, the charge was not fitted to the issues before the jury. The defendant did not deny that he requested the services rendered, but only that he promised to pay for them. Whether such a promise might be implied from the request was therefore a question which the jury, if they found the evidence insufficient to prove an express promise, would be called on to determine.

The rule of law that from the mere summons and request of a physician in an emergency to care for a person who is ill the law does not imply a promise to pay for the services rendered by the physician had no application to this case, as the defendant was not the person who summoned the plaintiff to care for the injured child.

"Hearsay" in Qualification and Cross-Examination of Experts

(Laird v. Boston & M. R. R. (N. H.), 117 Atl. R. 591)

The Supreme Court of New Hampshire overrules in this action for negligence the defendant's exception to the plaintiff's having been permitted on cross-examination to ask an expert witness called by the defendant whether he would modify his opinion if a certain admitted authority stated differently in his textbook. The court says that the use of standard authorities to discredit such a witness is a matter on which there is much diversity of opinion. The objection to such procedure on the ground that it violates the hearsay rule and permits the use of opinions which are not subject to cross-examination is unsound, or else it proves too much. If the opinion of one who is an authority cannot be used at all unless the holder of it is sworn and is subject to cross-examination, by what logic can the same inadmissible opinion be used as a basis for the admissible opinion of the expert witness? The opinion of the expert, qualified by study, is admitted as an exception to the hearsay rule. It is known to be founded on the assertions of others. Whether it shall be admitted or rejected depends on the witness' familiarity with the hearsay. Unless he is thoroughly versed in that hearsay, he is not qualified to testify. The reasoning of courts excluding inquiries about the authorities, on the cross-examination of the expert, leads directly to the conclusion that the opinion of the expert should be excluded. If the cross-examination puts before the jury the unsworn opinion of the authority, the direct testimony of the expert does the same thing, with the added infirmity involved in his recollection of what the authorities say.

The objection to this procedure is unsound for another reason. It appearing that certain printed books are received by the profession as authorities and as truly setting forth the views of certain authors, opinions based thereon are admitted in evidence. When the witness is confronted with the contents of one of these books that denies the views he has expressed, the issue presented is not whether the book states the true opinion of the author, but whether the witness has honestly and intelligently read and applied what is set down in the books. The view that the opinions used on cross-examination thereby become positive evidence leaves wholly out of consideration the fact that such opinions, being the foundation for the witness' opinion, are used solely to test its value, and assumes that trial courts and juries are either unable or unwilling to deal intelligently and fairly with restricted evidence.

Opinions are received in New Hampshire whenever it appears that they will be helpful, and the just and reason-

able corollary is that their value is open to investigation. The opponent may be permitted to test this value for various reasons and in various ways. There may be occasion to inquire whether the opinion is an honest one. Does it really express the views of the witness? If it be honest, does it represent the unanimous hearsay conclusion, or only a fragment of it? Has the witness made himself familiar with all the useful hearsay on the subject, or only a part? Having testified to the sum of the useful hearsay, he may justly be questioned concerning the units of which the sum is composed. No fact which tends directly to qualify or discredit the opinion given by the witness can be held to be inadmissible on his cross-examination, as matter of law. The whole field of hearsay knowledge on the subject is open to such investigation because of the nature of the opinion that has been received. How far this field can profitably be explored in a given case is a matter to be determined by the justice who presides at the trial.

Cases in which there was an evident abuse of this right in the reading of extended extracts from the authorities under the pretense of asking questions, or the standing of the author rested on the assertion of counsel, were not in point here, it being proved that the author was an eminent authority, while the question objected to related directly and simply to the point in issue.

Disease Contracted in Employment Not an "Injury"

(Industrial Commission v. Cross et al. (Ohio), 136 N. E. R. 283)

The Supreme Court of Ohio says that the question presented in this case was whether a disease contracted in the course of employment is an "injury," within the meaning of a statutory provision for compensation, when an employee is injured in the course of his employment. Thus far, this court has not been called on to determine whether the term "injury" was intended by the legislature to include diseases generally, although it did declare that the original voluntary workmen's compensation act, passed prior to the adoption of the present state constitution, did not contemplate compensation for occupational disease. The constitutional provision is that "for the purpose of providing compensation to workmen and their dependents, for death, injury or occupational disease, occasioned in the course of such workmen's employment, laws may be passed," etc. After that, the present workmen's compensation law was passed, and it may be presumed that, when it uses the same words or terms as does the constitution, it uses them in the same sense as they are used in the constitution. Consequently, as the constitution differentiates between "injury" and "occupational disease," and if injury did not include occupational disease it did not include disease generally, and disease generally was excluded from its contemplation by the specific inclusion of occupational disease, it is held that the term "injury," as used in the statutory provision under consideration, does not include diseases which are contracted, as distinguished from diseases which are occasioned by, or follow as a result from, physical injury. In the instant case, it was alleged that the employee contracted typhoid fever by drinking contaminated water from a spring near where he was employed, which was the only water available for use as drinking water. Compensation was denied by the industrial commission. The court of common pleas decided against the commission, and that court's judgment was affirmed by the court of appeals. But, construing the law as above, the supreme court reverses the judgments of those two courts, and sustains a demurrer to the claimants' petition. The supreme court holds that, if the scope of cases compensable is to be extended, it should be done by unambiguous legislative enactment rather than by judicial construction. For it must be recognized that, if the term "injury" is to be construed to include typhoid fever contracted in the course of employment, it may as well include influenza, pneumonia, tuberculosis, smallpox, ordinary colds, rheumatism and practically every disease which may be contracted by workmen in the course of employment; and the workmen's compensation department will become a health and life insurance department for workmen, compulsorily supported by employers, and the constitutionality of the whole scheme be endangered.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Roentgenology, New York

December, 1922, **9**, No. 12

Scientific Basis of Short Wave-Length Therapy. W. Duane, Cambridge, Mass.—p. 781.
*Function of Muscles of Stomach. A. E. Barclay, Manchester, England.—p. 792.
*What Is Best Method for Treatment of Uterine Fibromyoma by Means of Roentgen Rays? M. Béclère, Paris, France.—p. 797.
Protection in Radiology. G. E. Pfahler, Philadelphia.—p. 803.
Treatment of Cancer of Pelvic Organs with Moderate Radium Irradiation. J. G. Clark and F. E. Keene, Philadelphia.—p. 808.
Statistics and Technic in Treatment of Fibromyoma of Uterus by Radiotherapy. J. A. Corscaden, New York.—p. 812.
Estimation of Cardiac Volume by Roentgenology. C. R. Bardeen, Madison, Wis.—p. 823.

Function of Muscles of Stomach.—Experiments on the function of the muscles of the stomach are quoted by Barclay which he believes go a very long way toward confirming his hypothesis that the oblique band of muscle can act entirely independently of the circular and longitudinal coats; and if this is correct, gastroptosis is due to elongation of the oblique band, while hypotonus, or so-called atony, is the relaxation, lengthening and possibly stretching of the fibers of the circular and longitudinal coats, the oblique band retaining its normal length. The chief function of the oblique band is to carry the weight of the stomach and its contents. The functions of the other two coats are concerned with peristalsis and with that ligamentous action of muscle called tonic action, but which is better described as posture.

Roentgenotherapy of Uterine Fibromyoma.—For the large majority of cases of uterine fibromyoma Béclère prefers the treatment with small doses of roentgen ray given at short intervals.

American Review of Tuberculosis, Baltimore

December, 1922, **6**, No. 10

*Cauterization of Adhesions in Artificial Pneumothorax Treatment of Pulmonary Tuberculosis. H. C. Jacobaeus, Stockholm, Sweden.—p. 871.
*Compression of Lung by Paraffin Oil in Pleural Cavity. E. Archibald, Montreal.—p. 898.
Treatment and Organization for Combating Surgical Tuberculosis at Surgical University Clinic of Frankfurt-Am-Main, Germany. M. Flesch-Thebesius.—p. 900.
*Laryngeal Tuberculosis From Point of View of Pulmonary Specialist. C. L. Minor, Asheville, N. C.—p. 914.
*Effect of Six Weeks' Bed Rest on Patients Entering Trudeau Sanatorium. L. Brown and F. H. Heise, Trudeau, N. Y.—p. 920.
*Sodium Morrhuate in Treatment of Pulmonary Tuberculosis. W. D. Tewksbury, Washington, D. C.—p. 929.
*Treatment of Pulmonary Tuberculosis with Sodium Morrhuate. M. J. Fine, Newark, N. J.—p. 934.
*Action of Cod Liver Oil on Tubercle Bacillus. H. B. Campbell and J. Kieffer, Norwich, Conn.—p. 938.
Dorset's Egg Medium for Cultivation of Tubercle Bacilli, and Its Modifications. C. G. Burn, Philadelphia.—p. 950.

Cauterizing Adhesions in Artificial Pneumothorax Treatment of Lung Tuberculosis.—Jacobaeus discusses the technic and indications of his method of cauterization with the galvanocautery to remove adhesions in the artificial pneumothorax treatment of lung tuberculosis and presents his results. Of seventy-eight cases, published thus far, in fifty-five this method has been technically and completely successful in removing adhesions which prevented complete collapse of the lung. The clinical result has not been so favorable, as only forty-nine patients, or two thirds of all cases, have been symptom free. Although it has been impossible by this method to obtain as high a percentage of clinically improved cases as in cases of simple, uncomplicated pneumothorax without adhesions, Jacobaeus feels that the procedure ought to be of permanent value in, perhaps, a limited number of pneumothorax cases with stringlike or membrane-like adhesions.

Compression of Lung by Paraffin Oil.—In order to overcome the necessity of frequent refills and the danger of pleural effusions, sometimes infected, leading to adhesions

and the not infrequent loss of the pleural space in the production of an artificial pneumothorax, Archibald injected liquid petrolatum into animals and noted the results. He found that from the standpoint of the necessity of refills, paraffin oil cannot be relied on to remain inert in the pleural cavity because one half or more of the amount injected was later recovered from the chest. The experiments also showed that in a majority of the cases there occurred a slight aseptic inflammatory reaction, as the result of which minute nodules of fibrinous exudate become attached to the pleura and were ultimately organized. Most of these gave rise to no adhesions between the pleural leaves, but some did. The greater part of the pleural space remained free; but pocketing would occur chiefly in the lower third of the thorax. In a few cases the exudate of fibrin was found to be very considerable, and adhesions were extensive. In none of these latter cases could infection be demonstrated by cultures. A third point concerned the possibility of estimating the degree of lung collapse by roentgen-ray examination. It was found that liquid petrolatum allowed the rays to pass about as freely as does normal lung tissue. This study served to emphasize the advantage of air for pneumothorax work, particularly in such matters as roentgen-ray control, comparative lack of pleural irritation, manometric control of tension (found impossible, by the way, to register in the case of oil) and ease of removal in the event of unfavorable pressure symptoms.

Laryngoscopy Important in Tuberculosis Cases.—If the use of the laryngoscope were more general in cases of pulmonary tuberculosis, Minor is convinced that the early changes which are to be found in so large a number of these cases, and which with experience are not difficult of recognition, could easily be found. The lung specialist should always use the laryngoscope to confirm his diagnosis of pulmonary trouble, and then send the patient to the throat specialist for treatment.

Effect of Bed Rest in Pulmonary Tuberculosis.—While no striking evidence is produced by Brown and Heise to show the benefit of six weeks' bed rest to patients entering the sanatorium, under the conditions existing relative to selection of cases and time of beginning treatment, the authors feel, nevertheless, that under more favorable conditions, especially when treatment can be begun immediately on diagnosis, intensive bed rest will prove of benefit to the patient, although symptoms of definite activity are absent. A much more impressive idea of the seriousness of the disease and of the necessity of proper care is inculcated and this should, in later days, months or years, show beneficial results in the prevention of relapse.

Sodium Morrhuate in Pulmonary Tuberculosis. — The experimental work reported on by Tewksbury was done in the Tuberculosis Hospital, Washington, D. C., and was suggested by reports made in the British medical literature on the use of sodium morrhuate in tuberculosis. A 3 per cent. watery solution of sodium morrhuate, containing 0.5 per cent. phenol, was used, beginning with 7 minims of the solution given subcutaneously and increasing each injection 2 minims, up to 30 minims; then back to 7 minims intravenously, and increasing gradually to from 30 to 60 minims, depending on the patient's reactions and the progress of the case. The injections were given every fourth day. Of the eighteen patients treated, sixteen had an unfavorable and two a fair prognosis. All were in the moderately advanced or far advanced stage of the disease. The results obtained were: nine patients improved; six unimproved and three died. The most striking feature was the apparent breaking up of tubercle bacilli in the sputum and the tendency to their diminution in number or disappearance. This was noted in ten patients, and in two of these the sputum became entirely negative. It is not stated definitely that the improvement noted in the nine cases is due to the treatment, as patients of this type often will display periods of temporary improvement without any treatment, but Tewksbury feels that it is, at least, possible that the sodium morrhuate had some beneficial effect.

Sodium Morrhuate in Pulmonary Tuberculosis.—Of fifteen patients treated by Fine with subcutaneous injections of from 7 to 10 minims of sodium morrhuate, twice a week, five showed some improvement. Of these, two made a complete recovery. The sputum cleared completely in two cases. Three patients showed a local reaction. Seven patients coughed more after the injections; and in some instances treatment had to be discontinued on this account. One patient expectorated blood; and the question arises whether it is advisable to give treatment in cases with a history of hemorrhage. Four patients gained weight. Three showed improvement in chest signs. These results lead Fine to conclude that results obtained with the usual form of treatment are as effective as, and probably more so, than those obtained with sodium morrhuate; but that the sodium morrhuate deserves further trial and may be placed in the category of aids in the usual treatment of tuberculosis.

Action of Cod Liver Oil on Tubercle Bacillus.—In the manner in which it was used by Campbell and Kieffer, cod liver oil had a definite inhibitory and bactericidal action on virulent tubercle bacilli. Cod liver oil also inhibited the growth of a lepra bacillus, an avirulent tubercle bacillus and *Bacillus typhosus*. The aqueous extract of cod livers had no true inhibitory or bactericidal action on the tubercle bacillus. The most interesting and definite finding has been the increased granular appearance and granulation of tubercle bacilli and allied bacteria after contact with cod liver oil, especially in view of the fact that similar changes have been observed in the bacilli from sputum of patients treated with sodium morrhuate. Cod liver extract had the opposite effect on the tubercle bacilli. Cod liver oil, extracted with as little heat as possible and not refined in any way, seemed to have had a more potent action than commercial refined oil or oil extracted by heat.

Archives of Occupational Therapy, Baltimore

December, 1922, **1**, No. 6

Crafts Adaptable to Occupational Needs: Their Relative Importance. L. J. Haas, White Plains, N. Y.—p. 443.
Study in Occupational Therapy for Psychoneuroses. L. H. Ziegler, Waukesha, Wis.—p. 457.
Experiences in Directing Occupational Therapy Association. I. Kidder —p. 473.
Occupational Therapy in Tuberculosis Hospitals for Ex-Service Men. B. W. Carr, Washington, D. C.—p. 481.

Colorado Medicine, Denver

December, 1922, **19**, No. 12

Six Cases of Acute Perforation of Chronic Duodenal Ulcer. W. A. Kickland, Fort Collins.—p. 253.
Treatment of Malignancy by Radiation. W. W. Wasson, Denver.—p. 257.

Illinois Medical Journal, Oak Park

January, 1923, **43**, No. 1

Multiplex Pathology and Cancer Problem. W. S. Bainbridge, New York.—p. 20.
How Can a State Medical Journal Best Serve Its Readers? C. J. Whalen, Chicago.—p. 24.
*Ectopic Pregnancy. A. Hall, Mt. Vernon.—p. 33.
How to Meet Obstetric Emergencies. G. Gellhorn, St. Louis.—p. 37.
Cesarean Section Under Local Anesthesia. E. C. Roos, Decatur.—p. 42.
Experiences with Nonsurgical Drainage of Gallbladder. J. Mayer, Chicago.—p. 47.
*Syphilis of Lung; Review of Reported Cases. A. Egdahl, Rockford.—p. 50.
*Complement and Syphilis, with Special Reference to Biologic Action of Arsphenamin and Mercury. F. Herb, Chicago.—p. 54.
Benign Neoplasms of Larynx. J. A. Cavanaugh, Chicago.—p. 59.
Roentgen-Ray Treatment of Thyrotoxicosis. I. S. Trostler, Chicago.—p. 64.
Disturbances of Knee Joint. M. A. Bernstein, Chicago.—p. 70.

Ectopic Pregnancy.—Hall has seen twenty-one cases of ectopic pregnancy. Many of them were acute. In one case operation was refused and the patient died from hemorrhage the next day. The remaining twenty women were operated on and nineteen recovered. The only death that occurred was that of a double ectopic patient who had been treated by another physician six or seven days before a diagnosis was made. She had bled until she was almost pulseless. Her abdomen was filled with blood. She died five days following operation from peritonitis. Two cases were of more than usual interest. In one of these, a case of left tubal pregnancy, the rupture did not occur until the twentieth week, and when it did occur, there was no shock and no

hemorrhage. The fetus, nine inches in length, was found underneath the liver. The tube was removed with the placenta intact, and the woman made an uninterrupted recovery. The other case was one of twin pregnancy, an intra-uterine pregnancy combined with a tubal pregnancy. The tube was ruptured at the eighth week, accompanied with pain, internal hemorrhage and shock. The woman was operated on at once, and the diseased tube was removed. Not until the abdomen was opened was the uterine pregnancy discovered. The woman made an uninterrupted recovery and seven months later was delivered of a normal baby.

Syphilis of Lung.—Egdahl's patient had a negative history for syphilis but the blood Wassermann was four plus. The first symptom was cough, which was followed by night sweats, pains in both sides of the chest, and shortness of breath. There was no expectoration of blood. Examination of the chest disclosed signs indicating the presence of some pathology on the left side. The sputum was negative for tubercle bacilli and elastic tissue. This patient was given six injections of neo-arsphenamin followed by intramuscular injections of mercury. She improved markedly for about two years, when she had a severe attack of pain in the left side while at work, with symptoms of collapse. No lung disturbance that could explain her syncopal attack could be found. A markedly enlarged heart was demonstrated, indicating that an acute dilatation had occurred. As she still had a positive Wassermann reaction, she was given another course of neo-arsphenamin injections, with good results. This is being followed by the administration of mercury and iodids. Egdahl reports that his patient was feeling very well when last seen.

Complement and Syphilis.—The primary stage of syphilis, Herb asserts, is characterized by a sufficiency of ferments and complement and a negative Wassermann reaction. The secondary stage of syphilis and the positive Wassermann reaction are ushered in by the exhaustion of the ready supply of complement. It is characterized by a relative insufficiency of ferments, or complement, or both. The tertiary stage of syphilis is characterized by a total insufficiency of complement. Arsphenamin and mercury act biologically as complement. The lack of complement makes syphilis a formidable disease. In Herb's opinion, not stronger spirocheticides, but a less harmful complement is needed to combat syphilis.

Journal of Biological Chemistry, Baltimore

December, 1922, **54**, No. 4

Studies on Enzyme Action. XXI. Banana Gel and Banana Sucrase. K. G. Falk and G. McGuire, New York—p. 655.
Esterification of Creatin. A. W. Dox and L. Yoder, Detroit.—p. 671.
*Colorimeter for Bicolorimetric Work. V. C. Myers, New York.—p. 675.
*Relations Existing Between Arterial and Venous Blood of Dog with Special Reference to Plasma Chlorids. E. A. Doisy and J. W. Beckmann, St. Louis.—p. 683.
Nonprotein Organic Constituents in Blood of Marine Fish. W. Denis, New Orleans.—p. 693.
Behavior of Chlorids Introduced into Blood under Normal and Nephritic Conditions. F. P. Underhill and E. T. Wakeman, New Haven, Conn. —p. 701.
Influence of Subcutaneous Injections of Indol and Skatol on Nitrogenous Metabolism of Rabbit. F. P. Underhill and R. Kapsinow, New Haven, Conn.—p. 717.
*Preparation of Nucleic Acid from Nucleoprotein of Tubercle Bacilli (Tuberculinic Acid). T. B. Johnson and E. B. Brown, New Haven, Conn.—p. 721.
Pyrimidins Contained in Tuberculinic Acid. Nucleic Acid of Tubercle Bacilli. T. B. Johnson and E. B. Brown.—p. 731.
*Quantitative Aspects of Rôle of Vitamin B in Nutrition. T. B. Osborne and L. B. Mendel, New Haven, Conn.—p. 739.
*Studies in Inorganic Metabolism. IV. Influence of Yeast and Butter Fat on Magnesium and Phosphorus Assimilation. L. J. Bogert and R. K. Trail, Manhattan, Kan.—p. 753.
Vitamin A Content of Lard Obtained from Hogs on a Control Ration. M. G. Mallon and M. Clark, Lafayette, Ind.—p. 763.
*Comparison of Du Bois and Harris and Benedict Normal Standards for Estimation of Basal Metabolic Rate. W. M. Boothby and I. Sandiford, Rochester, Minn.—p. 767.
*Summary of Basal Metabolism Data on 8,614 Subjects with Especial Reference to Normal Standards for Estimation of Basal Metabolic Rate. W. M. Boothby and I. Sandiford, Rochester, Minn.—p. 783.
Diacetone Glucose. P. A. Levene and G. M. Meyer, New York.—p. 805.
Introduction of Benzylidene-1- Ethyl-2- Diazogluconate. P. A. Levene, New York.—p. 809.

New Colorimeter for Bicolorimetric Work.—A new colorimeter which has been designed chiefly for such bicolorimetric work as the colorimetric p_H determination is described by Myers. Standards are carried in wedges, one, two, or three of which may be employed at the same time. With one wedge the instrument may be used as an ordinary colorimeter. The second wedge provides for bicolorimetric work. To obtain a perfect match with unknown solutions which are slightly turbid or colored a third wedge may be used.

Migration of Hydrochloric Acid in Body.—A positive result in twenty out of twenty-two experiments made by Doisy and Beckmann they believe supports the occurrence of a migration of hydrochloric acid in the blood in the body.

Preparation of Nucleic Acid from Tubercle Bacillus.—Tubercle bacilli (human and bovine) have been carefully extracted by Johnson and Brown with toluene to remove fat, and the cellular structure was subjected to hydrolysis at ordinary temperature with 3 per cent. sodium hydroxid to separate the nucleic acid. The nucleic acid of tubercle bacilli has been precipitated by means of alcohol and 7.7 gm. was obtained which failed to respond to the biuret test for proteins. This specific nucleic acid has been named tuberculinic acid. The protein residue left behind after removal of tuberculinic acid has been analyzed according to the method of Van Slyke and its total nitrogen accounted for.

Rôle of Vitamin B in Nutrition.—In the feeding experiments conducted by Osborne and Mendel on white rats, a food mixture consisting of casein 18, starch 54, lard 15, butter fat 9, and salt mixture 4 per cent., which has demonstrated, as the result of many trials, that it will promote growth to full adult size when an abundance of vitamin B in the form of yeast is supplied, represented the "standard food" which was always furnished to the animals ad libitum, along with tap water. The vitamin B product usually consisted of tablets from a single lot of dried brewery yeast which has been used in the authors' laboratory for several years. The yeast was fed in a separate dish and almost invariably eaten promptly as soon as it was offered. In four groups of one series of experiments, in which 200 mg. of dry yeast were supplied daily to each rat, the animals with few exceptions reached the average adult size within the average normal time. Although the daily dosage of 200 mg. of yeast seems to suffice as a source of vitamin B to facilitate average growth at all periods until adult size is reached, the outcome with 100 mg., particularly after the animals attain a weight of 200 gm., tends to be less satisfactory. When the daily dosage is still smaller (50 mg.; 25 mg.), the rate of growth is more or less retarded from the very beginning of the experiments. In the case of the larger animals, 25 mg. of yeast per day failed in every instance to secure even maintenance of body weight for any length of time, although all of the animals recovered their weight and began to grow when the vitamin B intake was augmented. Even with somewhat smaller animals on the lowest dosage not only was no long continued growth secured, but maintenance became somewhat difficult. The daily requisite per 100 gm. of body weight seemed to approximate what is contained in from 50 to 60 mg. of the dry yeast.

Influence of Yeast and Butter Fat on Magnesium and Phosphorus Assimilation.—Bogert and Trail report that the magnesium and phosphorus balances in two normal women were favorably influenced by the addition of yeast to a diet of white bread, rice, lean beef, skimmed milk powder, purified nut margarine, sugar and starch. The calcium balances, determined over the same period on the same subjects and previously reported, were similarly affected. A third subject failed to show improvement of calcium or magnesium balances on the addition of yeast to the diet, although the retention of phosphorus was favored under these circumstances. The substitution of an equal weight of purified butter fat for the vegetable fat in the basal diet led to diminished fecal and total excretion of magnesium and phosphorus on a constant intake, with a favorable influence on the balances of these elements in all four subjects studied. In every case the calcium balances showed a simultaneous improvement, the metabolism of these three elements being closely parallel

throughout the experiment. Although these facts strongly suggest some relationship between the vitamin content of the diet and the assimilation of calcium, magnesium and phosphorus, the authors admit that the effects produced by the yeast and butter fat may be due to factors other than their vitamin content.

Comparison of Du Bois, Harris and Benedict Standards for Estimating Basal Metabolism.—It is shown by Boothby and Sandiford that there is remarkable agreement between the surface area calculated by the Du Bois surface area formulas and the formulas derived from Harris and Benedict's biometric correlation formulas for the prediction of the basal heat production. The Du Bois formula for the determination of the surface area and the Du Bois normal standards of heat production for each square meter of body surface for age and sex are considered by them the best method at present available for predicting the normal heat production.

Basal Metabolism Standards.—The data presented by Boothby and Sandiford are evidence to the effect that the basal metabolic rate differentiates diseases into those with increased, normal, and decreased metabolism as sharply as the temperature divides diseases into the febrile and afebrile groups. The two points especially emphasized are: first, that a high percentage of persons have a basal metabolic rate within ± 10 per cent. and a very high percentage within ± 15 per cent. of the Du Bois standards for age and sex for each square meter of body surface, provided the subjects have no definite disease that is characterized by a pathologic alteration in the rate of heat production; and second, that in a smaller percentage of these same subjects the basal metabolic rate is within the same limits when the Harris and Benedict standards are used.

Journal of Comparative Psychology, Baltimore

October, 1922, **2**, No. 5

Attention, Distraction and Fatigue. F. C. Dockeray.—p. 331.
*Effects of Cigar and Cigaret Smoking on Certain Psychologic and Physiologic Functions. R. L. Bates.—p. 371.
Instinctive Locomotor Reactions of Loggerhead Turtle in Relation to Its Senses. G. H. Parker.—p. 425.

Effects of Smoking on Function.—Bates' work was done with six reactors, under varying conditions, using the method employed by Carver in his observation of the effect of smoking on the accuracy of throwing darts at a target. As to the effect on the actual distribution of darts, in every case but one, the variation was less for the smoking days. The distribution was more uniform—less scattering—after smoking. The analysis of the quadrants of the target in respect to daily differences and differences in the progressive sets of the hour was likewise productive of negative results.

Journal of Infectious Diseases, Chicago

November, 1922, **31**, No. 5

Factors Influencing Development of Metachromatic Granules in Diphtheria Bacillus. E. Megrail, Cleveland.—p. 393.
*Experimental Botulism in Dogs. R. Graham and S. Eriksen, Urbana, Ill.—p. 402.
Factors Governing Fat Content of Bacteria and Influence of Fat on Pellicle Formation. L. W. Larson and W. P. Larson, Minneapolis.—p. 407.
Velocity of Fixation of Complement with Bacterial Antigens. R. L. Kahn and S. R. Johnson, Lansing, Mich.—p. 416.
*Determination of the Optimum Amount of Antigen in Complement Fixation Tests. VII. R. L. Kahn and S. R. Johnson, Lansing, Mich.—p. 426.
*Effect of Inactivation on Complement Fixing Substances in Syphilitic Serum. VIII. R. L. Kahn and S. R. Johnson, Lansing, Mich.—p. 438.
*Reliability of Sachs-Georgi Test for Syphilis. J. W. Rice, New York City.—p. 444.
*Immunologic Experiments with Platelets of Human Blood. F. R. Menne, Portland, Ore.—p. 455.
*Intestinal Bacterial Flora of Rats on Diet Deficient in Fat Soluble Vitamin A. F. Creekmur, Chicago.—p. 461.
*Direct Injection of Bacillus Typhosus into Gallbladder. T. D. Beckwith, Berkeley, Calif.—p. 468.
*Respiratory Infection and Septicemia of Cats Due to Hemolytic Streptococcus. S. Bayne-Jones, Baltimore.—p. 474.
Modified Gram Stains. N. Kopeloff and P. Beerman, New York.—p. 480.
Variation and Life Cycles of Pathogenic Bacteria. E. Almquist, Stockholm, Sweden.—p. 483.
New Method for Differential Staining of Bacteria (Cotton Blue-Safranin). F. M. Scales, Washington, D. C.—p. 494.
Isolation of Anthrax Bacillus from Shaving Mug. C. Vincent, Baltimore.—p. 499.

Experimental Botulism in Dogs.—Unfiltered type A toxin of *Clostridium botulinum* proved fatal to dogs in doses of 0.1 c.c. or more when administered subcutaneously by Graham and Eriksen. Type A spores, detoxicated by washing and heating, produced no noticeable effects when injected subcutaneously into dogs. Feeding relatively large amounts of unfiltered Type A toxin (100 c.c.) produced illness and death in dogs only when food had been previously withheld for forty-eight hours. The effects of other forms of artificially induced fatigue were not determined. The symptoms of Type A intoxication included loss of appetite, muscular weakness, languor, prostration, salivation, congestion of the mucous membranes of the mouth, and respiratory disturbances. Type A antitoxin apparently protected dogs against lethal amounts of toxin. Unfiltered Type B toxin of *Clostridium botulinum* administered intravenously and subcutaneously in liberal amounts failed to induce manifest symptoms. The internal organ and muscle tissues of horses and pigs which had died of Type A botulism were consumed by dogs without ill effects. Dogs appear to be satisfactory animals for differentiating A and B toxins of *Clostridium botulinum* following subcutaneous injection.

Quantitative Relation Between Serum and Antigen in Complement Fixation.—Studies made by Kahn and Johnson on the quantitative relation between serum and antigen in the Wassermann as well as specific complement fixation tests led to the evolvement of a simple titration method for the determination of the optimum amount of antigen for these tests. The widely employed method of titrating antigen for complement fixation tests consists of determining the so-called unit or smallest amount which will produce complete fixation of complement with a strongly positive serum and employing in the tests as many units as possible, providing the final amount is free from anticomplementary and hemolytic properties. This method is, in the authors' opinion, based on the wrong assumption that the greater the concentration of antigen, keeping the other constituents the same, the stronger the reaction. It was observed that with alcoholic extract antigens and syphilitic serums there exists an optimum range of antigen which will give complement fixation reactions of high sensitiveness with comparatively weak serums. This optimum antigen range may readily be determined with each antigen by a simple titration indicated in the text. This titration also indicates that the employment of excessive amounts of antigen may render weak or moderate reactions, negative. It was further observed that with bacterial antigens and specific immune serums similar antigen titrations did not disclose any optimum range of fixation for these tests. It could be readily discerned, however, that there is no advantage in employing excessive amounts of bacterial antigens. There appears, on the other hand, to be an important disadvantage since unnecessarily large amount of antigen may lead to nonspecific absorption of complement.

Effect of Inactivation on Complement Fixing Substances in Syphilitic Serum.—The inactivation of syphilitic serum for one-half hour at 56 C. was found by Kahn and Johnson to enhance the complement fixation reaction in many cases, providing the period of fixation was no less than four hours at icebox temperature. A small loss in antibody content following inactivation was observed in some cases. The proportional antibody gain, however, due to inactivation, was greater than the antibody loss.

Results of Sachs-Georgi Test for Syphilis.—When roughly classified into "positive" and "negative," the Sachs-Georgi tests agreed with the Wassermann tests in 94.4 per cent. of 1,000 cases tested by Rice. The Sachs-Georgi test appears to be less sensitive than the Wassermann reaction in patients receiving antisyphilitic treatment and in cases of cerebrospinal syphilis. The Sachs-Georgi test is just as sensitive as the Wassermann test in untreated cases of primary, secondary and tertiary syphilis.

Immunologic Experiments with Human Blood Platelets.—The immunologic reactions of human blood platelets, Menne

asserts, indicate the presence in platelets of specific antigenic constituents, and results of the precipitin test point to a definite difference in the constitution of the platelets and the leukocytes in human blood. The observations on human platelets support the views of Bedson and others that the platelets differ in their constitution from other elements of the blood.

Intestinal Flora of Rats on Diet Deficient in Vitamin A.—In a study made by Creekmur of the fecal bacteria of a group of rats on a diet so deficient in fat soluble vitamin A as to result in xerophthalmia and other conditions characteristic of this deficiency, as compared with a group on an adequate control diet, no change occurred in the relative proportions of gram-negative rods, gram-positive rods, gram-positive cocci, and gram-negative cocci, as determined by smears made from standard emulsions of the freshly collected feces. On the deficient diet, the feces of the majority of the animals became dry and hard, and the total number of viable bacteria was greatly decreased. When these animals were given fat soluble A in an amount sufficient to cause a disappearance of lesions, the feces became moist and soft and the total number of bacteria increased strikingly. In most of the animals on the deficient diet, streptococci disappeared completely. This may have been due to the unfavorable conditions brought about in the intestinal canal by the inadequate diet, the less resistant streptococci disappearing while the more hardy species merely decreased greatly in number. There was no change in the proportions of bacteria which fermented glucose, lactose and saccharose. The proportion of hydrogen sulphid forming bacteria remained constant.

Results of Injection of Bacillus Typhosus into Gallbladder.—Injection of *Bacillus typhosus* directly into the gallbladder of the rabbit was followed by prompt appearance of agglutinins within the circulation. This response was stimulated by dead as well as by living organisms. Typhoid bacilli implanted within the gallbladder pass through the lining epithelium and appear shortly in other organs, such as the spleen, liver, lung and kidney, but they were not isolated from the peripheral circulation. It seems likely to Beckwith that lymph is at least partially responsible for this distribution. Migration of *Bacillus typhosus* through the epithelium into the tunica is attended after appropriate lapse of time by the formation of lesions which are characteristic of those found in the typhoid carrier.

Epizootic in Cats Caused by Hemolytic Streptococcus.—An unusual epizootic in cats due to a variety of hemolytic streptococcus is described by Jones. The disease began as an infection of the upper respiratory tract and ended with septicemia. Pneumonia did not occur. The infection spread rapidly among associated animals and had a high mortality. The organism causing the disease, *Streptococcus hemolyticus*, resembled the human types of hemolytic streptococci more closely than the bovine type, but differed immunologically from the strains of both of these varieties, with which they were compared. All the strains of this streptococcus were identical.

Journal of Nervous and Mental Diseases, New York

January, 1923, **57**, No. 1

*Pathology of Senile Psychosis. Differential Diagnostic Significance of Redlich-Fisher's Miliary Plaques. S. Uyematsu, Boston.—p. 1.
*Structural Basis of Neuroses and Psychoses. L. B. Alford, St. Louis.—p. 26.

Diagnostic Significance of Redlich-Fisher Miliary Plaques.—One hundred cases of senile psychoses were subjected to a clinico-anatomic investigation by Uyematsu. Effort was made, particularly, to determine the differential diagnostic significance of the Redlich-Fisher miliary plaques, which Uyematsu regards one of the most important problems related to the presenile and senile psychoses. Apparently the plaques encountered in senile brains are not uniform in structure but consist of various components, differing by types and locations. The structure common to all is the court (Hof) which consists of dark stained fibrils of indefinite character. This part represents, in all probability, a destructive process of the ground tissue following the primary thickening of the neuroglia reticulum. The primary thickening of the reticulum is considered to be a reaction to the various degenerative processes of the ectodermal and mesodermal element, such as ganglion cells, neurofibrils, glia cells, glial fibers, blood vessels, products of pathologic metabolism, etc. So far as the nature of the pathologic metabolism is concerned Uyematsu has no definite conceptions although the ganglion cell origin is suspected by him. The abnormal reaction of the reticulum, which seems to be the basis of the entire process, is the characteristic feature of the senile brains. It may be primary exhaustion of nutritive energy, or a secondary characteristic caused by specific exogenous agencies. Although a great many plaques are found around the vessels, the reticulum reaction is not considered to be dependent directly on malnutrition of the parts supplied by altered vessels. Although many points remain unexplained, it seems to be certain, from what has been studied by others and by Uyematsu, that the plaques under discussion represent a specific degeneration of senile brains and their equivalent.

Structural Basis of Neuroses and Psychoses.—An attempt is made by Alford to explain the nature of the structural changes which have been assumed to be the basis of mental deviations. The method is that of comparative study. Taking for comparison such obscure nervous affections as progressive muscular atrophy, paralysis agitans, Little's disease and color blindness, it is shown that they fall into two groups: (1) the progressive and acquired, and (2) the stationary and congenital conditions. Evidence is offered to prove that they all have a structural basis and that in each case the degeneration or deficiency affects structures subserving one or a few closely related functional units. Through further comparisons, mental deviations are shown to fall into one or the other of these groups.

Kentucky Medical Journal, Bowling Green

November, 1922, **20**, No. 11

Accidents in Industries. J. G. Sherrill, Louisville.—p. 733.
Causes of Blindness in Kentucky School for the Blind. I. A. Lederman, Louisville.—p. 751.
Congenital Syphilis of Nervous System. F. G. Speidel, Louisville.—p. 755.
Pyelitis in Children. J. F. Dunn, Arlington.—p. 757.
Diarrhea in Children. W. L. Mosby, Bardwell.—p. 758.
Lacerated Perineum. E. S. Allen, Louisville.—p. 761.
Intussusception in Children; Report of Case. T. E. Craig, Fairdale.—p. 763.
Multiple Neuritis in Children and Its Treatment. H. T. Crouch, Bardwell.—p. 765.
Endocrines in Gynecology. J. J. Rodman, Owensboro.—p. 767.
Summer Diarrhea in Infants. J. W. Bruce, Louisville.—p. 771.
Brain Tumor: Case Report. L. W. Frank, Louisville.—p. 774.
Compression Fracture of Spine: Case Report. H. H. Hagan, Louisville.—p. 776.
Hydronephrosis, Hydro-ureter: Case Reports. O. Grant, Louisville.—p. 778.
Constipation in Adult. W. J. Shacklette, Glendale.—p. 779.
Canine Antirabic Vaccine for Prevention of Rabies in Dogs. L. H. South, Louisville.—p. 780.

New York Medical Journal and Medical Record

Jan. 3, 1923, **117**, No. 1

Modern Commentaries on Galen. Physiology of Voice and Organs of Respiration. J. Wright, Pleasantville, N. Y.—p. 1.
Establishment of Temporary or Permanent Pulmonary Lip Fistula in Conservative Treatment of Advanced Bronchiectatic Lung Abscess. W. Meyer, New York City.—p. 7.
Nine and One-Half Years' Experience with Artificial Pneumothorax. P. H. Ringer, Asheville, N. C.—p. 14.
Value of Roentgenogram in Diagnosis and Prognosis of Pulmonary Tuberculosis. G. G. Ornstein, New York.—p. 19.
Value of Complement Fixation Test in Tuberculosis. Hecht-Weinberg Modification. H. R. Upham and A. J. Blaivas, Brooklyn.—p. 22.
Tuberculosis and Poison Gas. A. P. Francine, Harrisburg, Pa.—p. 25.
Shall We Tell Our Tuberculous Patients the Truth? A. Minnig, Denver.—p. 27.
Abscesses Descending from Upper Air Passages. O. Glogau, New York.—p. 29.
Climate in Treatment of Pulmonary Tuberculosis. H. Schwatt, New York.—p. 32.
Roentgen-Ray Study of Tuberculous Lungs. T. Frazer and J. D. MacRae, Asheville, N. C.—p. 34.
Present Status of Radiation Treatment of Tonsils. C. F. Robinson, Barre, Vt.—p. 39.
Case of Ludwig's Angina. D. H. Levy, New York.—p. 40.

Peritonsillar Abscess of Unusual Location. A. I. Schwartz, New York.—p. 41.
Diagnosis of Optic Neuritis Due to Sinus Disease. J. N. Hoffman, Canton, Ohio.—p. 42.

Oklahoma State Medical Association Journal, Muskogee

December, 1922, **25**, No. 12

Tuberculous Infection in Children. R. M. Balyeat, Oklahoma City. —p. 343.
Tuberculosis of Kidney. J. Z. Mraz, Oklahoma City.—p. 345.
Pyelitis in Pregnancy and Puerperium. J. A. Hatchett, Oklahoma City. —p. 348.
Pyelitis. L. A. Mitchell, Frederick.—p. 353.
Acute and Chronic Salpingitis and Treatment. J. L. Shuler, Durant. —p. 355.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Children's Diseases, London

October-December, 1922, **19**, No. 226-228

*Prenatal Hygiene and Problems of Maternity and Child Welfare. W. M. Feldman.—p. 169.
*Severe Blood Diseases of Childhood: Purpura. F. J. Poynton, H. Thursfield and D. Paterson.—p. 178.
*Pel-Ebstein Type of Hodgkin's Disease. E. Cautley.—p. 185.
Cerebral Hemorrhage in Newborn Child. C. F. T. East.—p. 189.

Prenatal Hygiene.—Feldman urges that prenuptial clinics should be established where persons of both sexes can get expert advice as regards their fitness to marry, and no person knowingly suffering from syphilis should be allowed to marry; breach of such a rule should be made a penal offense. All cases of prenatal syphilis should be thoroughly supervised and treated as soon as diagnosed. Feldman also stresses the need for and value of prenatal hygiene and care. All expectant mothers should, as far as possible, refrain from using alcohol (at any rate in excess) or excessive smoking throughout pregnancy. They should be protected from exposure to infectious disease or dangerous industries, such as lead, phosphorus or tobacco factories. Attention to the teeth, bowels and kidney functions is of great importance during pregnancy. Careful watch should be kept of the relative size of the fetus and the maternal pelvis, and any abnormal presentation should be converted into a vertex presentation before labor. Antenatal wards or beds should be provided in connection with all antenatal clinics for the purpose of treating abnormalities of pregnancy, as well as for the purpose of carrying out properly directed and well coordinated biochemical, pathologic and statistical research.

Primary Purpura in Children.—Ten cases of idiopathic or primary purpura are analyzed by Poynton et al. They are divided into three groups: (1) purpura hemorrhagica; (2) Henoch's purpura, and (3) cases in which there were subcutaneous hemorrhages with little or no constitutional disturbance. The onset of the purpura was always sudden, but the duration varied; some of the children had repeated attacks and were for years never free of some hemorrhage. It would appear from this study that the essential point in the purpura formation is not the diminution of blood platelets, but some poison acting on the vital capillary walls, damaging their integrity. The prognosis in the simple cases was good, but two fulminating examples of purpura hemorrhagica were both rapidly fatal. The cases of the Henoch type showed the well known tendency to recurrence, and dragged on for some yars. Treatment was unsatisfactory, apart from rest.

Pel-Ebstein Type of Hodgkin's Disease.—The characteristic features of the illness in the case cited by Cautley, occurring in a girl, aged 8, were: a prolonged local stage of glandular hyperplasia in the neck and a generalized stage of pyrexia, which assumed a relapsing type, severe and progressive anemia, a yellowish-gray tint of the skin, enlargement of the cervical glands, liver and spleen, slight bronchitic attacks with breathlessness, sometimes semidelirium, erythropenia and leukopenia, and a fatal issue. There was no evidence of tuberculosis—an alternative diagnosis—and the Pirquet reaction was negative. Treatment proved unavailing. Permission to hold a necropsy was not granted.

British Medical Journal, London

Dec. 30, 1922, **2**, No. 3235

Clinical Significance and Treatment of Heterophoria. A. S. Percival. —p. 1249.
*Case of Ophthalmic Migraine with Unusual Symptoms. A. R. Moodie. —p. 1256.
Education of Partially Blind Children in Myope Classes. H. W. Thomson.—p. 1257.
*Relation of Optic Nerve to Sphenoidal and Posterior Ethmoidal Sinuses. G. Young.—p. 1258.
Ophthalmic Progress in Egypt. A. F. MacCallan.—p. 1259.
*Cerebrospinal Fluid in Disease of Fundus. W. J. W. Ferguson.—p. 1259.
Monocular and Binocular Vision. T. S. Barrie.—p. 1260.
"Open" Treatment in Eye Operations. W. B. I. Pollock.—p. 1262.
Review of Work of Venereal Diseases Center of Glasgow Eye Infirmary. E. J. Primrose.—p. 1263.
Conjunctivitis Artefacta. H. Caiger.—p. 1264.

Ophthalmic Migraine with Unusual Symptoms.—The case reported by Moodie is one of the ophthalmic type of migraine, with scintillating scotoma. It was associated with epileptic convulsions. The Wassermann test was negative.

Relation of Optic Nerve to Sphenoidal and Posterior Ethmoidal Sinuses.—Young examined by dissection the sphenoidal sinuses in thirty subjects. In twenty-seven cases the bone between the nerve and the sinus was so thin, in at least part of its course, that the suture was easily apparent through it. In four specimens there was actually a hiatus in the bone covering the nerve, while in one of these specimens there was more hiatus than bone in the posterosuperior and lateral walls of the sinus—so much absorption had taken place. With regard to the relative size of the sphenoidal sinuses, the intersinus septum was markedly deflected in many cases, making one sinus much larger than the other. This difference in size was sometimes so great that the larger sinus was found to be in relation to the heterolateral optic nerve or cavernous sinus, or both. The actual figures were, that in thirteen cases the sphenoidal sinus of one side was in relation to the heterolateral cavernous sinus, and in nine cases the sphenoidal sinus was in relation to the heterolateral optic nerve. The sclerotic type of sinus was in a very small minority, three cases being in this category, the walls of the remaining twenty-seven being very thin. Ostia in the bone were very commonly found in the lateral wall of the sphenoidal and ethmoidal masses, the boundary between the nose and the orbit. These led into the sinuses, giving passage to numerous blood vessels. Numerous blood vessels were noted occupying these ostia as the lining membrane was stripped from the nasal wall of the orbit. Young believes these facts may be applied to support the clinical evidence that optic neuritis may arise from diseased postnasal sinuses.

Cerebrospinal Fluid Worthy of Investigation.—In Ferguson's opinion the condition of the cerebrospinal fluid would be worthy of investigation in a large group of cases, in particular those of young adults suffering from diplopia, optic atrophy, or retrobulbar neuritis. The colloidal gold reaction, he thinks, is of undoubted value as indicating the first definite sign of organic disease of the central nervous system. Additionally, it may enable one to say whether a transient diplopia is or is not purely functional, and may help to differentiate cases of retrobulbar neuritis and optic atrophy, indicating those in which the condition is part of a more general nervous disorder, and more especially those which may be followed after a considerable period by disseminated sclerosis.

Indian Medical Gazette, Calcutta

December, 1922, **57**, No. 12

Therapeutics of Cinchona Alkaloids. R. N. Chopra.—p. 441.
Analysis of Clinical Picture in Kala-Azar. L. E. Napier.—p. 446.
*Exceptional Hernias. J. W. Wanless.—p. 452.
Ether In Tropics: Pinson's Apparatus. A. Hootan.—p. 455.
Relapsing Fever in Bhavnagar. B. N. Mehta.—p. 456.
Foreign Body (Fish) in Air Passages, Removed by Laryngotracheotomy. Maung Po Pe.—p. 457.
*Case of Traumatic Aneurysm of Spleen. W. L. Harnett.—p. 457.
One Hundred and Seventy-Nine Cases of Ancylostomiasis Treated with Chenopodium in Penang. D. C. Richards.—p. 460.
Case of Congenital Absence of Spleen. R. S. Grewal.—p. 461
Case of Tetanus. H. R. Wadhwani.—p. 462.
Case of Cataract in a Child Following Lightning Stroke. W. V. Coppinger.—p. 462.
Cases Treated with Electrolytic Chlorogen (E. C.) at the Pusa Hospital. Michael.—p. 463.

Points of Importance in Performing Herniotomy.—Emphasis is laid on three points by Wanless which he says should always be borne in mind in operations for the radical cure of inguinal hernia, namely: (1) indirect hernias are seldom scrotal; (2) the bladder is often in contact with or occasionally within the sac of an indirect hernia and liable to injury in dissection; (3) in indirect hernias a double sac frequently exists with the bladder fundus in close contact with the lower one and therefore also liable to injury or inclusion by sutures in making the plastic closure. This is particularly the case when there is a weak or attenuated conjoined tendon.

Traumatic Aneurysm of Spleen.—The case related by Harnett is one in which the aneurysm developed slowly and no treatment was sought until nearly three years after the injury which caused the trouble. The man had fallen between an engine and the station platform but managed to extricate himself, though the abdomen was so severely contused that he was laid up for a month after this accident. For the last six months he had suffered from attacks of pain in the left iliac fossa, lasting about half an hour and passing off gradually. The attacks came on quite suddenly at regular intervals and were not related to taking food. They were of a griping character and he felt nauseated, but did not actually vomit during the seizures. He was quite well between the attacks; the bowels were rather constipated and there were no urinary symptoms. There was an oval, freely mobile tumor, measuring about 4 by 2 inches, in the left iliac fossa. On the outer side of the tumor a blunt edge could be felt, toward the lower extremity of which was a notch. The tumor was firm, elastic, dull on percussion and not tender. It could be moved freely in the left half of the abdomen, down into the left iliac fossa and across as far as the middle line. It could be replaced under the left lower ribs and once placed there could only be extruded again by the patient sitting up. Handling the tumor did not cause any pain. The other abdominal organs were normal. The patient stated that the tumor sometimes disappeared for a few days and then suddenly reappeared. No splenic dulness could be percussed when the tumor was free in the abdomen, but impairment of resonance could be demonstrated when the tumor was replaced under the ribs. The swelling proved to be the spleen, enlarged to about twice its normal size and having attached to its inner aspect a cystic, thin walled, fluctuating swelling, of a yellowish-white color, incorporated with and appearing to protrude from the splenic substance. The swelling, which was about the size of a tangerine orange, was too intimately incorporated with the spleen to admit of excision; so splenectomy was decided on. The case appears to have been one of what was originally a hematoma of the spleen, probably sustained at the time of abdominal injury three years previously. The abdominal injury appears to have caused rupture of a splenic blood vessel which led to the subsequent formation of the false aneurysm.

International Journal of Psycho-Analysis, London

December, 1922, **3**, No. 4

Study of Artistic Preference. J. Varendonck.—p. 409.
Tobacco and the Individual. A. A. Brill.—p. 430.
Prenatal Psychisms and Mystical Pantheism. T. Schroeder.—p. 445.
Rescue and Murder of Father in Neurotic Phantasies. K. Abraham.—p. 467.
Tobacco. E. Hiller.—p. 475.
Tongue. D. Bryan.—p. 481.

Lancet, London

Dec. 30, 1922, **2**, No. 5183

*Hypersthenic Gastric Diathesis, and Pathology, Prophylaxis and Treatment of Duodenal Ulcer. A. F. Hurst.—p. 1369.
Emetin Bismuthous Iodid in Treatment of Amebiasis. P. M. Rennie.—p. 1374.
*Syphilis of Lung. W. T. Munro.—p. 1376.
*Serologic Classification of Staphylococci. T. G. M. Hine.—p. 1380.
*Three Thoracic Emergencies. G. A. Stephens.—p. 1382.
Case of Pott's Disease Associated with Injury. F. B. Hobbs.—p. 1383.
Case of Oral Sepsis. G. Steele-Perkins.—p. 1383.

Hypersthenic Gastric Diathesis; Duodenal Ulcer.—Hurst is convinced that duodenal ulcer should still be regarded as a medical and not a surgical disease. Recognition of the diathesis, which predisposes to it, and of the primary and accessory exciting causes which lead to its actual development, should encourage medical men to think more of its prevention than its cure; even if they are only consulted when it is too late to talk of prevention. They should no longer remain content with the treatment of the active ulcer, but should regard the prevention of recurrence as a matter of equal importance.

Syphilis of Lung.—In order to determine the incidence of syphilis among a presumably tuberculous population, a Wassermann reaction has been done by Munro on all admissions to a sanatorium. Of the first 100 persons examined, 6 per cent. had syphilis of the lungs; 11 per cent. had a positive Wassermann reaction and tubercle sputum plus; 3 per cent. had tuberculosis, with Wassermann reaction positive and tubercle sputum minus; 2 per cent. had positive Wassermann reaction with diagnosis other than tuberculosis. Acquired syphilis of the lung may occur in three conditions: (1) gummas; (2) fibroid induration; (3) areas of consolidation and catarrh. Fibroid induration is the most common. In these six cases analyzed the initial lesion appeared to be at the right base. No patient of this type was under 35 years of age. The shortest time between infection by the spirochete and symptoms referable to the chest was three and a half years. Antisyphilitic treatment in the early stages is recommended by Munro but when bronchiectasis is well established he says, treatment is not likely to lead to improvement. Two cases of focal disease were found. Both patients improved on treatment.

Serologic Classification of Staphylococci.—Hine contends that there are two main groups of staphylococci: Group I being pyogenic and almost always forming acid with mannite, while Group II resembles the so-called *S. epidermidis-albus*, usually failing to make acid in mannite broth and generally forming white colonies. The first group contains, at least three serologic types, of which Type I is the most common representing 90 per cent. of the examples of the group. The second group (resembling the old *S. epidermidis-albus*) contains two serologic types, the second of which was not so common in Hine's series as the first, and appears also to have some pathogenic properties; the group is more irregular in its biochemical and chromogenic qualities than the first or pyogenic group.

Enlarged Thymus; Ruptured Heart; Ruptured Superior Vena Cava.—A man, aged 25, discharged "fit" from the army, collapsed when at work and expired immediately. Postmortem examination showed all the organs to be healthy save two—namely, the cardiac apparatus, in which the intrapericardial pressure was atmospheric, and the thymus, which was 9 inches long, extending downward over the pericardium. There was no evidence of injury or of inflammation. Another case cited by Stephens is that of a boy, aged 16, who was standing near a crane from which was suspended a heavy steel tube. As the tube was lowered it pressed against his chest and abdomen; he then stepped back a few paces and fell down dead. Postmortem examination showed that the intrapericardial pressure was atmospheric, and on opening the sac it was found to be full of blood. In the right auricle was a tear 1 inch long. A man, aged 42, was found dead in a cellar into which he had fallen through a manhole. Postmortem examination showed the sternum to be fractured at the sternal angle. On opening the chest a marked extravasation of blood was found behind the seat of the fracture due to a tear in the superior vena cava.

Medical Journal of Australia, Sydney

Dec. 2, 1922, **2**, No. 23

Obstetric Experiences During Fifteen Years of General Practice. H. Gilbert.—p. 631.
Value of Complement Fixation Reaction in Gonococcal Infections. A. S. Walker.—p. 634.
Rectovaginal Adenomyoma with Chronic Endometritis. A. N. Krakowsky.—p. 642.

Dec. 9, 1922, **2**, No. 24

*Hemangioma (Endothelioma) of Breast, etc. B. T. Edye.—p. 663.
Asthma. G. C. Willcocks.—p. 668.
*Unusual Kidney. T. K. Potts.—p. 670.
Case of Hydatid of Lung. W. A. R. Sharp.—p. 671.
Antistreptococcal Serum in Puerperal Infection. W. Upton.—p. 672.
Puerperal Septicemia Treated with Blood Transfusion. H. Leaver.—p. 673.

Multilocular Cystadenoma of Retroperitoneal Origin.—Edye reports one case each of hemangioma (endothelioma) of the breast; tumor of the carotid body, and multilocular cystadenoma of retroperitoneal origin. Microscopically, the cysts in the third case were seen to be lined by papillary processes covered by columnar cells; an arrangement similar to that observed in some cystadenomas of the ovary. Many of the cells were separating and becoming rounded in shape. In the solid portions the tumor had assumed malignant characters. The cells were spherical or oval and were supported in a papillary manner by a scanty stroma with delicate capillaries.

Fibrotic Type of Kidney Tuberculosis.—With a wholly negative previous history Potts' patient, aged 42, had a sudden attack of pain in the left kidney region which persisted for one week and ceased suddenly. The pain was not very severe, did not radiate along the course of the ureter and was not accompanied by vomiting or any disturbance of micturition. The patient remained well for the next six months and then had a similar attack, except that it lasted only twenty-four hours, but was more severe. During the first five months of this year she had similar mild attacks at intervals of from two to three weeks, lasting on an average about twenty-four hours. The roentgen-ray report was negative as was also the analysis of the urine. The kidney was exposed and removed. The kidney surface was studded with whitish nodules which were numerous in three sectors of the cortex, one at each pole and one in the center. Under the microscope these nodules were found to be fibrocellular in structure, with a few scattered and imperfectly developed giant cells, suggesting a fibrotic type of tuberculous infection, which is unusual in the kidney. Nodules of similar structure were also found in the kidney substance close up to the renal pelvis, but the nodules there were much fewer than in the cortex. The renal pelvis itself was not obviously involved. Sections stained by the Ziehl-Neelsen method failed to reveal tubercle bacilli. In Potts' opinion, the infection is tuberculous, but of a type rare in the kidney.

Archives Franco-Belges de Chirurgie, Brussels

August, 1922, **25**, No. 11

Dermoid Cyst of the Anterior Mediastinum. E. Moons.—p. 959.
Regional Anesthesia of Neck and Arm. Brunin and Vandeput.—p. 965.
Metal Aids in Fractures and Pseudarthrosis. Charbonnel.—p. 994.
Primary Resection of Astragalus and Malleolus. G. Miginiac.—p. 1005.
*Experimental Research on Snake Bites. G. Bolognesi.—p. 1010.
Spina Bifida Occulta. H. J. J. Blauwkuip.—p. 1018.
The Albee Graft and Pott's Disease in Adults. F. Lambrichts. —p. 1023. Idem, Moreau.—p. 1030.
The Albee Implant in Children. Marique.—p. 1027.

Experimental Research on Snake Bites.—Bolognesi experimented on rabbits with snake venom, either by direct bite from the reptile or through inoculation in the hind legs. He states that the aim of his study was to attract attention to the local histopathologic findings, which, he says, have not yet been described on the basis of systematic experimental research. The lesions explain the local clinical syndrome of patients bitten by venomous reptiles. He remarks that Phisalix has studied mainly the effect of snake venom on the nervous system, the heart and circulation, respiration, blood and temperature, while Houssay and Sordelli have devoted attention mainly to the coagulation of the blood.

Archives des Maladies du Cœur, Paris

November, 1922, **15**, No. 11

*Therapeutic Use of Physostigmin. J. de Meyer.—p. 749.
Auricular Extrasystole with Paroxysmal Tachycardia. L. Gallavardin. —p. 774.
*Basophilic Inclusions in Neutrophils. J. Sabrazès.—p. 778.

Therapeutic Use of Physostigmin.—De Meyer used physostigmin sulphate partly by the mouth (1 to 1.5 mg. per day or 10 drops of a solution of 3 cg. (½ grain) in 30 c.c. of water two or three times daily), and partly by intravenous injections of 0.5 to 1 mg. in 2 c.c. of water. It is important to make the injections as far from the meals as possible, as 1 mg. may produce vomiting. The results were very good in simple and thyrogenous tachycardia. Combination with strophanthus had a marked effect on sino-auricular paroxysmal tachycardia, but less of an influence on ventricular tachycardia. Auricular fibrillation was so well influenced that he preferred it in some cases to digitalis. Cases which are refractory to quinidin should be treated with physostigmin. Respiratory arrhythmia disappears after physostigmin, and since its action seems to consist exclusively in a stimulation of the autonomic system, it could replace, to advantage, the oculocardiac test. Tachycardias due to hypertension or hypotension, aortitis, nephritis or toxic conditions are not suitable for this medication.

Basophilic Inclusions in Neutrophils.—Sabrazès dissolves 0.5 gm. of toluidin blue in 10 c.c. of 95 per cent. alcohol and adds 90 c.c. of 3 per cent. aqueous solution of phenol. The dry, unfixed smears treated with this solution show the basophil inclusions in the neutrophils in a grayish blue color.

Archives de Médecine des Enfants, Paris

December, 1922, **25**, No. 12

*Local and Spinal Anesthesia in Children. H. L. Rocher.—p. 705.
*Acquired Chronic Hydrocephalus. J. C. Navarro et al.—p. 720.

Local and Spinal Anesthesia in Children.—Rocher uses a solution of 1:300 of cocain in Hayem's fluid with addition of epinephrin for local and regional anesthesia, and procain for spinal anesthesia. Cocain is well tolerated by children, and it can and should be employed for local and regional anesthesia. Spinal anesthesia with procain has been used by Rocher in 125 children from 4 to 15 years old without any accident.

Acquired Chronic Hydrocephalus.—Navarro, Beretervide and Garrahan publish thirteen cases, and review of acquired hydrocephalus. The etiology is almost always syphilitic, and the treatment should be energetic. Lumbar puncture must be made periodically to relieve the tension of the fluid. The results are sometimes excellent.

Bulletin de l'Académie de Médecine, Paris

Dec. 5, 1922, **88**, No. 40

*Public Health in the United States. L. Bernard.—p. 378.
*Levulose in Diabetes. M. Labbé.—p. 393.
*Osteoperiosteal Grafts. H. Delagenière.—p. 396.
France's Consumption of Cereals. L. Lapicque.—p. 417.
*Blood Crisis After Ligature of an Extremity. J. Le Calvé.—p. 422.
*Law on the Mentally Defective. J. Roubinovitch and E. Debray. —p. 424.

Public Health in the United States.—This report by Bernard was summarized in the Paris Letter in THE JOURNAL, January 13, p. 122.

Levulose in Diabetes: Acidosis from Inanition and from Diabetes.—Labbé admits that glucose is less well burned than other carbohydrates, but finds that nothing proves that levulose is better utilized than other carbohydrates, including starch. The tests by oral ingestion depend on the rapidity of absorption. Therefore, small repeated doses are better tolerated than large ones. Labbé maintains that the acidosis arising in healthy persons from lack of carbohydrates is fundamentally different from the acidosis of severe diabetes. One can even produce a benign acidosis in light cases of diabetes. It disappears with the ingestion of carbohydrates. This acidosis is never as high as that of real diabetes. The largest amount of acetone bodies observed in fasting healthy persons was less than 19 gm., while 100 gm. of acetone bodies are not uncommon in severe diabetes. He found once as much as 247 gm. in a day. The inanition acidosis is a pure ketosis: The excretion of ammonia is only slightly increased, and there is no greater excretion of amino-acids nor of other organic acids except aceto-acetic and beta-oxybutyric. In the urine in diabetic acidosis there is much ammonia and amino-acids and many other organic acids (butyric, acetic, lactic, propionic, etc.). The addition of carbohydrates to the diet reduces inanition acidosis, but Labbé never saw a diabetic acidosis disappear after addition of carbohydrates.

Osteoperiosteal Grafts.—Delagenière's method consists in transplantation of a piece of periosteum and underlying bone, from 2 to 3 mm. thick. He takes the graft from the inner aspect of the patient's tibia, and uses care to bring it into good contact with living tissue. Scars or sclerotic tissue should be resected, although even in them the graft takes, but not as well, and less rapidly. Immobilization is necessary. In two or three weeks a soft callus forms which becomes

solid in two or three months. Even grafts which become contaminated usually take, at least partially, and may give good results. He describes the technic in different typical operations (cranioplasty, pseudarthrosis, etc.). His experience extends over 296 cases.

Blood Crisis After Constriction of an Extremity.—Calvé observed typical hemoclastic crises in some patients after constriction of an extremity. He used the method clinically to preserve against shock (injection of serum, colloidal metals, arsphenamin). For this purpose it is recommended to make the constriction ten to fifteen minutes before the injection. It has also a desensitizing effect. If an extremity is constricted each morning for ten minutes, good results may be obtained in alimentary intolerance, angioneurosis, migraine, asthma and perhaps in epilepsy.

Law on Social Adaptation of the Mentally Backward.—Roubinovitch and Debray report very favorably on the results of this law. The patients earn as much as an average worker of their class. Although admitting that agriculture is to be preferred, the authors quote Rocher's observation that defectives from towns suffer in the country from nostalgia. They believe that the facultative law of 1909 has proved beneficial, and it should be made compulsory for these *arriérés perfectibles.*

Encéphale, Paris

November, 1922, **17**, No. 9

Origin and Nature of Hallucinations. E. Bleuler.—p. 537.
*Pituitary Tumor. P. Sainton and E. Schulmann.—p. 554.
*Bilateral Pontine Syndrome. Dide and Peytou.—p. 563.
*Cerebrospinal Fluid in General Paresis. R. Targowla.—p. 567.
Essential Bases for a Reform of Psychiatry. R. Mourgue.—p. 570.

Case of Pituitary Tumor of Fourteen Years' Standing.—Sainton and Schulmann describe an unusual case of epithelioma of the anterior lobe of the pituitary. The patient was kept alive for fourteen years by roengen-ray treatment.

Bilateral Posterior Pontine Syndrome.—Dide and Peytou report the clinical findings in the unique case of a bilateral lesion of the posterior part of the pons. It started possibly as an encephalitis in childhood, and the 37 years old patient had a complete loss of lateral movements of the eyes, asynergy, and tremors of the head and extremities, normal sensibility except for impaired hearing on the right side, and an infantile state of mind.

Reaction of Cerebrospinal fluid with Paregoric in General Paresis.—Targowla mixes 5 drops of distilled water, 15 drops of cerebrospinal fluid, and 15 drops of paregoric. In a control tube the cerebrospinal fluid is replaced by distilled water. The total precipitation is noted as three plus, a partial by two plus, and a feeble by one plus. He examined eighty-eight fluids from sixty-five patients with general paresis; eighty-four fluids (sixty-three patients) were positive. In one case the reaction was positive in spite of a negative Wassermann reaction and negative benzoin test. One of the negative results turned positive at a second trial. Three other negative patients were in a state of prolonged remission, with very feeble reactions to other tests.

Gynécologie et Obstétrique, Paris

November, 1922, **6**, No. 5

*Constitution and Uterine Myomas. A. Rosner.—p. 305.
*Inversion of Uterus During Childbirth. Dantin.—p. 310.
*Otitis Media in the New-Born. Mahu and E. Chomé.—p. 313.
Bilateral Tubal Pregnancy. Z. do Amaral.—p. 319.
Uteroparietal Fistula After Cesarean Section. R. Loicq.—p. 322.
*Autohemotherapy in Pregnancy Dermatitis. E. Lévy-Solal.—p. 330.

Localization of Uterine Myomas and Constitution of Sexual Organs.—Rosner examined 340 cases of myomas: 107 submucous and 283 interstitial or subperitoneal. All the women with submucous myomas had a normal or strong constitution. Not one was infantile, hypoplastic or masculine. Only 10 per cent. of them were sterile. Fully 60 per cent. of the women with subperitoneal myomas were constitutionally defective, and 73 per cent. were sterile.

Case of Acute Uterine Inversion in Delivery.—Dantin reports a fatal case of uterine inversion. It was caused by the midwife who tried to extract the placenta by traction on the cord immediately after delivery.

Middle Ear Infections in the New-Born.—Mahu and Chomé report a case of otitis media in a new-born child infected during a prolonged delivery. The infection probably occurred during inspiration or a swallowing movement. They emphasize Renaud's findings of otitis in every one of his seventy necropsies in infants. They recommend instillation of a few drops of an antiseptic in the nose, especially when delivery is prolonged in infected cases.

Autohemotherapy in Dermatitis of Pregnancy.—Lévy-Solal publishes four cases of different dermatoses of pregnancy, three of which were cured and one (psoriasis) ameliorated by injections of the patient's own blood. In one case of urticaria the second injection increased the itching very strongly, but it subsided after the third injection.

Journal de Médecine de Bordeaux

Oct. 25, 1922, **94**, No. 20

*Diagnosis of Ascites by Percussion. G. Chavannaz.—p. 667.
Constipation in Nurslings. J. Boisserie-Lacroix.—p. 668.
Medicine and Aviation. R. Cruchet.—p. 673.

To Aid Percussion in Diagnosis of Ascites.—Chavannaz applies percussion when the trunk is bent, and twists the body on its transverse rather than on its longitudinal, axis. In twenty years of experience he has found this instructive in difficult cases.

Médecine, Paris

November, 1922, **4**, No. 2

Syphilis and Dermatology in 1922. H. Gougerot.—p. 85.
*Myopathies Due to Hereditary Syphilis. E. Jeanselme.—p. 96.
*Treatment of General Paresis. J. A. Sicard.—p. 102.
*Early Diagnosis of Syphilitic Chancre. L. Hudelo.—p. 107.
*Lilac Arch on Nails in Syphilis. G. Milian.—p. 112.
*Treatment of Syphilis Before the Chancre. L. Spillmann.—p. 114.
*Abortive Treatment of Syphilis. Levy-Bing and Gerbay.—p. 119.
*Syphilitic Origin of Diabetes. M. Pinard. —p. 123.
Acquired Syphilis in Children. P. Fernet.—p. 125.
Salts of Bismuth. M. Pomaret.—p. 130.
*Mixed Affections of Skin. L. Brocq.—p. 132.
*Scar-Forming Affections of Scalp. R. Sabouraud.—p, 138.
Autohemotherapy in Dermatology. J. Nicolas et al.—p. 147.
Incomplete Forms of Mycosis Fungoides. Louste.—p. 150.

Progressive Myopathies Due to Hereditary Syphilis.—Jeanselme presents the first clinically well studied case of a primary dystrophy of muscles of the Leyden-Moebius type (affection of spinal cord excluded by electric reactions) in a young man with a weak positive Wassermann reaction. His father is a syphilitic. Jeanselme assumes that syphilis can influence the muscular system like other organs, and does not discuss the possibility of a coincidence.

Treatment of General Paresis.—Sicard discusses the reasons for the resistance of spirochetes in general paresis, and sees the only way to change it is in drawing the spirochetes from the brain into the general circulation. One of these methods consists in a series of shocks provided by injections of horse serum during the course of arsphenamin treatment. Some good results were obtained by him with this method. Some hopes are attached to his other method: injections of arsphenamin and similar products in an ether narcosis. Possibility of using heroic surgical proceedings is suggested—perhaps craniectomy, to transform the circulation in the brain—because he believes that any therapeutic method which looks sensible is justified in an established general paresis.

Early Diagnosis of Syphilitic Chancre.—Hudelo emphasizes the importance of early recognition of syphilis for the abortive treatment. In every case of soft chancre one should suspect syphilis. The seroreaction is necessarily negative in this stage (except for some possibilities with the use of serum from the lesion), but the presence of spirochetes is decisive, and should be looked for every day or two; by 0.5 to 2 mm. deep scarifications, followed by expression of the serum. The border between the lesion and the healthy skin may be crowded with spirochetes. The diagnosis before the tenth day of the disease should be the rule, not the rare exception.

Lilac Arch on Nails in Syphilis.—Milian finds that older syphilitics have on some fingers an arch 0.5 to 1 mm. broad, lilac colored, about 4 to 5 mm. behind the free border of the nail and parallel with it. The outer border is well defined, and sometimes there is a white zone. He says it is a living witness to active syphilis, inherited or acquired.

Treatment of Syphilis Before the Appearance of Chancre.—Spillmann discusses a case of a syphilitic soldier on furlough who had sexual intercourse with his wife. He recommends to start the treatment if one can prove the sexual contact with a person presenting contagious lesions. A mere positive Wassermann reaction in the partner is not a sufficient indication. He warns against persons with syphilophobia.

Abortive Treatment of Syphilis.—Levy-Bing and Gerbay believe that abortive treatment of syphilis is possible only before the disease is generalized. Before thirty-eight days after the infection a perfect cure is not difficult. After forty-five days it is usually impossible.

Syphilitic Origin of Diabetes.—Pinard had among twenty-three diabetics, eleven with acquired and five with probable hereditary syphilis. He believes that many of the complications of diabetes (loss of reflexes, mal perforant, neuritis, so-called pseudotabes) are in reality manifestations of syphilis. He believes that the same explanation can be given in conjugal and familial diabetes. He rates the syphilitic etiology at 80 to 90 per cent. of diabetics.

Mixed Affections of Skin.—Brocq exposes a new class of affections of skin which he calls *dermatoses complexes.* It is not a mere complication, like pyoderma in scabies. Brocq's new class gives the impression, from the start, of being a simple affection, but is formed in reality by an intimate mixture of two or more affections. Many therapeutic failures can be explained by overlooking this. A lupus mixed with syphilis may present the appearance of simple lupus. In other cases lupus may be associated with phagedenism which can be influenced by hot air, methylene blue, etc. Other complex dermatoses can result from two different cutaneous reactions, for example, urticaria in a papulo-vesicular eczema. Others may be due to a mixture of a real disease with a cutaneous reaction; parasitic affections of the skin can be hidden by eczema or parakeratosis. The physician who does not recognize both factors makes the mistake either of paying attention only to the eczematous reaction, which he cannot heal, or he tries to treat the infection too energetically, and irritates the eczema. Many dermatoses, like psoriasis, are favorably influenced by different remedies, changing according to the actual state of the patient. One should never despair.

Diagnosis of Scar-Forming Affections of Scalp.—Sabouraud gives an instructive paper on these diseases. The exact distinction is important for the treatment. In favus one never should forget to examine the hair around the scar for parasites which may persist for a long time. Impetigo may lead to formation of scars if it is neglected. The scar following a sycosis capillitii resembles the favus scar, but it presents, as long as the disease lasts, new attacks of purulent folliculitis at the edges, while favus is always quiet and torpid. A similar disease due to infection of single follicles by staphylococci is usually overlooked, until the little scars and alopecia appear, because the infection does not cause violent reactions. Acne of the neck can last for years, advance slowly, and may leave a scar of the size of the palm. Yet it could have been cured by epilation and ointments containing sulphur. When erythematous lupus attacks the scalp, it always causes from the very start alopecia, and it progresses towards a complete atrophy of the skin. It progresses by a few spots of different size, resembling a geographic map, forming sometimes islands. The border is always red. Carbon dioxid snow and infrared rays give good therapeutic results.

Presse Médicale, Paris

Dec. 6, 1922, **30**, No. 97

*Provocation of Angiospasm. A. Thomas.—p. 1049.
Dysenteriform Enteritis by Amoeba Coli. Orticoni and Gazzola.—p. 1052.
Experiments on Hydrocephalus. A. Chiasserini.—p. 1053.

Provocation of Angiospasms in Arteritis and Intermittent Claudication.—Thomas was able to produce spasms of the vessels in intermittent claudication by different means. Slight massage for a few seconds made the limb extremely pale. Passive movements and pressure on the malleoli gave the same result, if the patient was reclining. If the extremity is lowered, the color returns quickly and much more effort is necessary to induce the spasm. The extremity blanches before the claudication starts. It is remarkable that not only active and passive movements, but also pressure on the malleoli or the iliac crest, and even exposure to cold air, leading to goose-skin, may provoke the spasm. A healthy subject making quick flexions and extensions of his lower extremity differs from the pathologic only quantitatively. The extremity becomes pale, and the oscillograph may reveal smaller excursions of the pulse for a short time. The venous circulation is increased by movements of the muscles, and the arteries of untrained persons do not supply a sufficient quantity of blood; this leads to the local anemia.

Revue Franç. de Gynécologie et d'Obstét., Paris

November, 1922, **17**, No. 11

*Actinotherapy in Gynecology. F. Jayle.—p. 561.
*Wassermann Reaction in Obstetrics. Gaujoux and Foulquier.—p. 589.

Radiotherapy in Gynecology.—Jayle reviews the use of radium and roentgen rays in gynecology. There is no better method than rays in cases of inoperable cancer, but surgery remains the method of choice, when possible. After-treatment with rays following an operation has given wonderful results in some cases, but Jayle gives final results and asks a careful study of the question. In uterine fibromas not influenced by pituitary extract, roentgen rays may be tried, although they are neither harmless nor infallible.

Wassermann Reaction in Obstetrics.—Gaujoux and Foulquier emphasize that complement fixation, valuable as it is, may be negative in cases of unquestionable syphilis.

Archivio Italiano di Chirurgia, Bologna

November, 1922, **6**, No. 3

*Tumors of Carotid Gland. F. Fedeli.—p. 217.
*Hydatid Cyst in Spleen. O. Cignozzi.—p. 258.
*Treatment of Hypospadias. U. Camera.—p. 277.
*Peptic Ulcer of the Jejunum. R. Brancati.—p. 297.
"Nourishment During Operations." P. Bastianelli.—p. 331.

Tumors of the Carotid Gland.—Fedeli illustrates the findings in a tumor removed from the bifurcation of the common carotid in a man of 59, and gives brief summaries of ninety cases in the literature. In seven the tumor was a necropsy surprise. He remarks that nearly every one who has studied these tumors has given them a different name, as there is still so much uncertainty as to the significance of the carotid body.

Echinococcus Disease of the Spleen.—Cignozzi found the hydatid cyst in the spleen in 4 of his 62 cases of echinococcus disease, while the liver was involved in 44. The cysts in the spleen in his cases, had a capacity of from 200 to 600 c.c. and the outline of the spleen was characteristic. The general health was good, but albumin and tube-casts were found in the urine as also in his liver cases. In both they disappeared in from four to six days after the operation. He advocates splenostomy as the only treatment; adhesions generally interfere with splenectomy in these cases, but suturing the lips of the incision to the skin answers every purpose, he adds. He gives an illustrated description of the technic for the operation, and emphasizes the necessity for plastic repair of the breach in the abdominal wall. His simple and effectual method for this was summarized in these columns June 18, 1921, p. 1803.

Treatment of Hypospadias.—Camera describes with illustrations what he says is a new method for correction of penoscrotal hypospadias. He applied it in the case of a boy of 13, and extols the advantages of the ample nourishment of the flap he uses, and the absence of any deep sutures, while the extensive contact of raw surfaces insures prompt healing. He diverts the urine through the perineum, and cuts out the skin over a rectangular area, like an inverted U, in the anterior surface of the scrotum. This denuded area is 3.5 cm. wide, and 2 cm. longer than the penis. A strip of skin is left intact in the center of the inverted U. The penis is then incised its entire length on each side of the urethra, and the soft parts are loosened up, the raw surface of the flaps turned back forming a broad extension of the raw surfaces on the scrotum. The rectangular area from which the epidermis has been removed in the scrotum is then cu

through the layers down to the vaginalis. This provides a thick flap with a broad peduncle at the top. This flap is then turned over upward, which brings the skin-covered stretch opposite the urethra bed, and the raw surface each side against the raw surface of the penis side flaps. The skin-covered stretch fits over a sound introduced through the hypospadias opening and perineal fistula. To keep this skin-covered stretch in place, to form the new urethra, four stitches are taken on each side to suture it to the fascia of the penis on each side of the sound. He gives further an illustration of a little cork splint, a kind of frame, which fits over the new urethra in its entire length, and holds everything in place during the healing process.

Genesis of Peptic Postoperative Ulcers.—Brancati states that a peptic ulcer developed in 5 of 10 dogs after resection of the pylorus and part of the stomach. The findings in 90 animals after various operations on the stomach are analyzed. They demonstrate beyond question, he says, that peptic ulcers are invited by removal of the prepyloric portion of the stomach and by dysfunction of the loop of the bowel connected with the pancreas and biliary system. The gastric juice altered in its composition, or not sufficiently modified by the pancreatic juice and bile, or abnormal from both these factors combined corrodes the wall of the jejunum.

Revista Española de Medicina y Cirugía, Barcelona

November, 1922, **5**, No. 53

*Vaccination Against Typhoid. F. Gallart Monés.—p. 627.
Face Presentation. J. Ruiz-Contreras.—p. 633.
*Cesarean Section in Infected Cases. F. Proubasta.—p. 639.
Spinal Anesthesia. E. Matons.—p. 643.
Modern Drugs of Vegetable Origin. F. Bascompte.—p. 646.
Medicinal Melanuria. Idem.—p. 648.

Typhoid at Barcelona.—Gallart Monés summarizes the experiences in a number of towns in Spain in which recent epidemics of typhoid have been arrested by compulsory anti-typhoid vaccination. In several other towns many persons took advantage of the free vaccination offered. At Barcelona the typhoid death rate per thousand inhabitants has ranged from 3.641 in 1914 to 0.382 in 1921, the 272 typhoid deaths in 1921 being the smallest figure ever reached. He urges that the prophylaxis of typhoid should be enforced along the same lines as vaccination against smallpox.

Porro's Operation.—Proubasta expatiates on the supreme recourse at our disposal in Porro's operation, even in the most deplorable conditions of dystocia and infection. He makes a point of severing the vascular pedicles of the uterus; this allows more thorough packing with gauze to protect the peritoneum. To reduce the shock as much as possible, he partly sutures the abdominal incision as soon as the uterus is drawn out, without waiting further. In one of his cases even panhysterectomy did not remove all the foci of infection. Thrombophlebitis, pneumonia and phlegmasia alba dolens followed the Porro, with final recovery.

Semana Médica, Buenos Aires

Sept. 21, 1922, **2**, No. 38

*Pyelolithotomy. R. Finochietto.—p. 574.
*To Reduce Infant Mortality. P. Rueda.—p. 575.
*Symptoms with Disease of the Kidneys. C. H. Niseggi.—p. 579.
Sexology the Mother of Eugenics. E. Accame.—p. 585.
Present Conceptions of Physical Training. V. Delfino.—p. 600.
Treatment of Tuberculosis. Gumersindo Sayago.—p. 602.
Opsonic Index in Vaccine Treatment of Tuberculosis. J. A. López.—p. 605.
*Treatment of Varicocele. E. Ferrando.—p. 609.
Deep Roentgen-Ray Therapy. C. Heuser.—p. 612.
*Periodic Precipitation in Biology, etc. A. L. Herrera.—p. 615.
Psychophysiology of Hearing. V. Ribón.—p. 622.

Pyelolithotomy.—Finochietto emphasizes the necessity for ascertaining the shape and size of the calculus before operation. Carelli's method of insufflation of a gas around the kidney—perirenal emphysema—is of great assistance. A large branching calculus is usually broken in removal, and he makes a practice of deliberately cutting it. He uses stout shears for this, and cuts off the branch close to the main body of the calculus. This generally allows the branch and the main body to be easily extracted separately. His illustrations show the forceps grasping each half of the calculus in turn. A small supplementary slit can be made in the kidney proper if either part of the calculus is too broad at the tip.

Puericulture.—Rueda was the founder of the infantorium at Rosario. He urges direct medical inspection in the home or hospital of every new-born child. He insists that medico-social efforts in this line would aid materially in reducing infant mortality.

The Manifestations of Disease of the Urinary Apparatus.—Niseggi recalls that the slightest derangement of kidney function is liable to cause disturbances throughout the organism, even at points remote from the urinary apparatus. On the other hand, the patient in describing his symptoms—especially pain in the lumbar region—may ascribe everything to the kidney, when in reality the kidneys may be sound. Impairment of vision and hearing, pruritus, digestive disturbance from elimination of the retained toxins through the mucosa of the alimentary tract, dyspnea from autointoxication, uremic asthma, and nervous disturbances in the eyes, the muscles, and elsewhere, are all useful in differential diagnosis. The most instructive clue is a history of some acute infection with transient nephritis or of an intoxication with lead, arsenic, phosphorus, iodoform, or from an extensive burn. Tuberculosis of the kidney may develop without pain; when present, the pain is spontaneous, irregular, and not influenced by movements. It is aggravated by eating, by the menses, by pressure on the kidney, and is relieved by lying down. Sometimes the pain takes the form of lumbar neuralgia, or kidney colic from the migration of a clot or cheesy scrap into the ureter. The diseased kidney may be free from pain while the sound kidney may be painful; the sound kidney hypertrophies, and this may be responsible for the discomfort. Niseggi describes in detail the tender points with kidney disease, and urges their differential importance; two in the back, five in front, and two in the side.

Treatment of Varicocele.—Ferrando describes Marenco's technic which has been applied successfully in twenty cases since 1916. The veins in the anterior bundle of the spermatic cord are resected for 3 or 4 cm., and the testicle, enclosed in its vaginalis, is drawn through a slit in the parietal layer of the serosa. The serosa is then inverted and a stout catgut thread is passed through each end of the wound. The testicle is restored to place and supported at the proper height, and the catgut is tied on each side and fastens it thus to the cellular tissue of the root of the scrotum, to Poupart's ligament, or to the rectus muscle. The testicle is thus left of good size and shape, held immovable at the proper height by a cicatricial envelop, and the stretched scrotum usually shrinks to normal size.

Biologic Importance of Sedimentation.—Herrera declares that rhythm, which presides over all the functions of organic life, is normal also in inorganic formation, and interests the mineralogist and the geologist as well as the biologist and physician. Sedimentation is a biologic factor which, as yet, has not been sufficiently heeded.

Nov. 9, 1922, **2**, No. 45

*Urethrotomy. J. Nin Posadas.—p. 945.
Abdominal Surgery. Jaime Salvador.—p. 947.
Pneumoperitoneum for Diagnosis of Ovarian Tumors. A. Chueco.—p. 948.
Alcoholic Cirrhosis and Psychosis in Boy Aged 5. J. M. Obarrio.—p. 951.
Protein Therapy in Infectious Diseases. M. Angel Marini.—p. 956.
Pemphigus of Mouth and Throat. R. Becco.—p. 971.
Factors in Infant Mortality. E. Accame.—p. 972.
Mechanism of Contraction of Mammalian Heart. T. Padilla.—p. 974.
Relations Between the Tonsils and the Pituitary. Lagomarsino.—p. 983.
Certain Symptoms That Yield to Ferrán's Alpha Vaccine. J. A. López.—p. 985.

Urethrotomy.—Nin Posada's urethrotome cuts the stricture at two opposite points; the blades are sharp on both edges. He has not had menacing hemorrhage in its use, except in two cases, one of them hemophilic.

Siglo Médico, Madrid

Dec. 9, 1922, **70**, No. 3600

Means to Combat Infant Mortality. Martínez Vargas.—p. 557.
*Epinephrin in Treatment of Burns. Aracnio Plaza.—p. 560.
Anthrax in a Diabetic. Carlos A. Vago.—p. 562.
The Diagnosis and Prognosis in Pediatrics. Suñer.—p. 565.

Epinephrin in Treatment of Burns.—Plaza expatiates on the advantages of giving epinephrin systematically to tide patients with severe burns over the period of nervous shock. In the three cases he describes, the benefit was pronounced. When the epinephrin was suspended, the condition grew worse, and improved again on its resumption.

Dec. 16, 1922, **70**, No. 3601

*Brain Traversed by Bullet. C. Juarros.—p. 581. Cont'd.
Case of Agoraphobia in a Girl. B. Gil y Ortega.—p. 584.

Syndrome from Injury of the Centrum Ovale.—The bullet had traversed the brain, passing horizontally through the left frontal and emerging through the left parietal bone. Disturbance in speech, which resembled the scanning speech of multiple sclerosis, and slight paresis of the entire right side were associated with reduction of the power of association and thought.

Beiträge zur klinischen Chirurgie, Tübingen

1922, **127**, No. 3

*Calvé-Legg-Perthes' Disease. G. Perthes and G. Welsch.—p. 477.
*Recurrence of Goiter. Enderlen and Hitzler.—p. 526.
Dissecting Osteochondritis of Knee. E. Roesner.—p. 537.
Chorio-Epithelioma. E. Forster.—p. 562.
Malignant Chordomas. Linck and Warstat.—p. 612.
Tumors from Aberrant Mammary Gland Tissue. Sonntag.—p. 627.
Sensibility of Skin After Section of Nerve. L. Franz.—p. 641.
*Epithelium Grafting. K. Reschke.—p. 647.
*Spontaneous Arrest of Bleeding. H. Stegemann.—p. 657.
*Treatment of Defects in Dura and Skull. P. Drevermann.—p. 674.
*Mechanism of Acute Atony of Stomach. W. Koennecke.—p. 698.
Malignant Lentigo. G. Kob.—p. 709.
Synostosis of Radius and Ulna. Sonntag.—p. 716.
Surgery in Hippocrates' Day. E. Melchior.—p. 721.

The Calvé-Legg-Perthes' Affection of the Hip-Joint.—Perthes here brings down to date his experience with what he calls osteochondritis deformans of the hip joint, with which his name has been connected since 1913 and Legg's since 1910. His fifty-one illustrations show the course and outcome in fourteen cases under continuous roentgen control. The course averaged four and a half years. The complete healing and excellent functioning of the joint confirm the benign nature of this osteochondral trophopathy. No appreciable benefit was manifest from immobilization or extension.

Recurrence of Goiter.—Statistics are given showing recurrence in 29 per cent. of 795 cases followed to date, with operative treatment of the recurrence in 9 per cent. To avoid recurrence, a change to a region free from endemic goiter might be considered. It is possible that the absence of recurrences in the records of certain surgeons may be due in part to the locality being free from endemic goiter.

Active Epithelial Implants on Wound Surfaces by Pels-Leusden's Method.—This is a method of grafting with a mash of epithelial particles, blood and serum scraped up from the skin after the outer layer has been scraped off. It was described in THE JOURNAL, Oct. 21, 1922, p. 1465. The epithelium in this pulpy condition is injected, with a thumb-screw syringe, under the granulations, either at scattered points or in a passage as long as the needle. The proliferating epithelium then makes its appearance in islands or strips. One great advantage of the method is that the surface does not have to be cleaned for it. The proliferation occurs regardless of the secretions covering the surface of the granulating area. A colored plate shows the aspect of a leg ulcer with eight large islands of new-formed epithelium, seven days after injection of the *epithelbrei*. Peschke adds that another advantage is the rapid healing of the area from which the epithelium mash was scraped up. It heals much faster than the defect left by a Thiersch flap, and the whole procedure takes much less time than Braun's seedling method or any other mode of promoting healing of granulating areas. The healing has been excellent even in large traumatic defects of the skin over joints, and in lining cavities in bones. It has failed only in three instances; one was a burn on the sole, and one a defect after removal of a sarcoma of the thigh that had been given intensive roentgen-ray treatment.

Arrest of Bleeding in Surgery.—Stegemann remarks that practically the same measures are used now to arrest bleeding that were used by Celsus and Galen. Recent research has demonstrated that the active contraction of the injured capillaries or other blood vessels is an important factor in hemostasis.

Treatment of Defects in Dura and Skull.—Drevermann reviews the experiences in Lexer's service with various substances to cover a gap in the dura and skull. In 24 of the total 60 cases the interval since has been less than three years. In 30 of the others, a loose flap of fat was used to close the gap in the dura. In the 13 cases with already developed epilepsy, the seizures persisted unmodified in all but a group of 6, in which 5 were cured and one materially improved. In the 17 cases in which there had been no epilepsy at the time of the operation, no attacks developed afterward except in one case. Five pages of bibliography, set solid, are appended.

Acute Atony of the Stomach.—Koennecke's experimental research has refuted the assumption that mechanical factors alone are responsible for the occlusion of the duodenum and acute atony of the stomach. The latter is the primary. Some disturbance in the innervation entails the atony and dilatation of the stomach. The stretched stomach then kinks the duodenum at the point where it is most firmly fastened.

Deutsche medizinische Wochenschrift, Berlin

Dec. 8, 1922, **48**, No. 49

*Adaptation of Research. W. His.—p. 1635.
*Emaciation in Diseases of Intestine. L. Kuttner.—p. 1637.
*Endocarditis Lenta. E. Hassencamp.—p. 1638.
*Cancer of Uterus. H. Küstner.—p. 1640.
*Blood Transfusion in Pernicious Anemia. H. Götting.—p. 1641.
*Treatment of Pyelitis. G. Daniel.—p. 1642.
Diseases of Female Bladder. I. v. Büben.—p. 1643.
*Myxedema with Lipomatosis. F. Kisch.—p. 1644.
*Roentgen Ray Sickness and Cachexia. H. Hirsch.—p. 1646.
*Hypertension After Electric Injury. W. Pfalz.—p. 1647.
Active Principle of Antigens in Serodiagnosis of Syphilis. E. Epstein and F. Paul.—p. 1648.
Median Fistula of Neck. G. Takeda.—p. 1649.
Illumination of Vagina. E. Kantorowiz.—p. 1650.
*Febrile Abortion. M. Henkel.—p. 1650.
Examination of Nose. Finder.—p. 1651.
Birth and Death Rate of Children in East Africa. R. Lurz.—p. 1652.
Conc'n.

Adaptation of Research to New Conditions.—His discusses the ways to continue research in spite of new conditions.

Loss in Weight in Diseases of the Intestine.—Kuttner warns physicians against making the diagnosis of tuberculosis of the intestine too lightly. The symptoms may be due to inflammatory diseases, for instance a chronic dysentery with insidious onset, or to functional troubles. Achylia gastrica leads to nutritional disturbances only when the stomach is obstructed, or when the intestine does not work properly. Fermentative and putrefactive diarrhea may lead to loss of weight. Thyrogenous diarrhea is a very important cause. Constipation, especially in young anemic and chlorotic girls, may induce a loss in weight. Endocrine disturbances and a neuropathic disposition may be contributory causes. Such women often believe they cannot eat because they have not enough bowel movements.

Endocarditis Lenta.—Hassencamp discusses this disease the frequency of which is increasing in Germany, especially among ex-soldiers. The diagnosis is not difficult: Valvular (usual aortic) lesion, fever between 37 and 38 C., tumor of spleen, anemia, embolic processes, especially in the kidney. He does not believe in the strict specificity of *Streptococcus viridans*.

Surgery and Roentgen Rays in Treatment of Uterine Cancer.—Küstner operates when possible and irradiates subsequently. Fifty c.c. of an antistreptococcus serum is given before the operation. The abdominal operation is the method of choice.

Blood Transfusion in Pernicious Anemia.—Götting injects from 500 to 1,000 c.c. of blood, and reports favorably on the results.

Treatment of Pyelitis.—Daniel commends the Meyer-Betz-Haas' diet, which consists of restriction of fluids, and of sweating to obtain a concentrated, acid urine. Hexamethylenamin, salicylates and phosphoric acid are given in addition. He follows four days of this diet by three days of increased fluid intake (2 to 3 quarts of tea), and then repeats.

Myxedema in Lipomatosis.—Kisch finds almost always a hypofunction of the thyroid in cases of constitutional obesity (except in dystrophia adiposogenitalis).

Roentgen-Ray Sickness and Cachexia.—Hirsch treated these conditions by injections of extract of the anterior lobe of the pituitary, an epinephrin-free extract of the cortex of suprarenal capsules, and an extract of an organ which had been irradiated (ovary). The results were good from this diverse organotherapy for these acute and chronic roentgen-ray injuries.

Hypertension After Electric Shock.—Pfalz describes the case of a young man with periods of hypertension after a severe injury by electricity. Pfalz attributes it to an increased irritability of the vasomotor center, due to the injury.

Febrile Abortion.—Henkel rates clinical signs above the bacteriologic finding. The main question is whether the infection is limited to the ovum or is progressing to the uterus or has become generalized. He recommends expectant treatment as far as possible. The remnants of the fetus are removed with the finger, instead of with the curet.

Deutsche Zeitschrift für Chirurgie, Leipzig

November, 1922, **175**, No. 1-6

*Concussion of the Brain. A. Ritter.—p. 1.
*Supracondylar Fracture of Humerus. H. Kälin.—p. 45.
*Fracture of Styloid Process of Ulna. H. R. Schinz.—p. 81.
*Causes of Postoperative Weakness of the Heart. E. Brack.—p. 138.
*Lymph Capillaries. G. Magnus.—p. 147.
Chronic Stenosis of Duodenum. Koennecke and Meyer.—p. 179.
Hernia on Spigel's Line. A. Sohn.—p. 204.
Treatment of Appendicitis with Complications. E. O. Schmidt.—p. 213.
*Bronchial Fistulas. W. Gast.—p. 219.
*Progressive Ossifying Myositis. W. Löhr.—p. 238.
*Perforation of Duodenum After Contusion. A. Furtwaengler.—p. 261.
Thoracic Access to Foreign Body in Esophagus. L. Heidenhain.—p. 292.
*Acute Edema of the Pancreas. H. Zoepffel.—p. 301.
Genital Complications of Appendicitis. F. de Gironcoli.—p. 313.
Peptic Jejunal Ulcer. H. Els.—p. 327.
Idem. Jenckel and Schüppel.—p. 337.
Pyogenic Infection of Blood. A. Buzello.—p. 370.
*Origin of Ischemic Contracture. A. Schubert.—p. 381.
*Operation for Floating Liver. F. J. Kaiser.—p. 411.
*Incarceration of Intestine in Slit in Mesentery. Borbe.—p. 454.

Injury of the Brain.—Ritter discusses the injuries of the brain with which general symptoms predominate. The article is based on 626 cases at Zurich in the last twenty years. Analysis of the cases shows a pronounced difference in the clinical manifestations according as the commotion involved the medulla oblongata or other parts of the brain or the whole brain. This classification is important in estimating the consequences of the injury for proper treatment at the time and later, as well as from the accident insurance standpoint. The true concussion fatality is due to arrest of the respiration by the blow on the medulla oblongata, pressing on the respiration center. No organic injury is found at necropsy. The longer the interval before death, the greater the probabilities of pathologic anatomic findings. The medulla concussion cases have a favorable prognosis, unless immediately fatal. In a year and a half at latest, all the disturbance had disappeared in the cases reexamined. In the cases of concussion of other parts of the brain the disturbances persisted long but finally all disappeared in an average of nearly twenty months. The cases of diffuse contusion of the brain showed still longer persistence, from three to ten years, but final recovery was the rule. Treatment is mainly symptomatic, artificial respiration, lowering the head, etc., and as stimulants, whiffs of ether, pouring hot water on the body, the faradic brush to the soles, etc. Of supreme importance for the later course is strict bed rest, at least for three weeks. Lumbar puncture is never needed in pure medulla concussion cases.

Supracondylar Fracture of Humerus.—An abnormal position of the forearm is manifest in twenty of fifty cases of low fracture of the humerus reported by Kälin. It seems to be a growth anomaly which it is impossible to prevent.

Fracture of the Wrist.—Five pages of bibliographic titles, three plates, and forty illustrations in the text accompany Schinz' study of fracture of the styloid process of the ulna.

Unusual Causes for Heart Failure After Abdominal Operations.—Both patients were robust men, and merely a minor operation had been done. Adhesions kinking the portal vein were responsible for the paralytic ileus in one case. It could easily have been avoided if the portal vein had been inspected at the operation. In the second case the fatal collapse after the simple gastro-enterostomy was explained by pneumopericardium. It had been overlooked at the operation. The case teaches that pneumopericardium should be among the possible causes suspected when the heart weakens suddenly after an operation on the stomach. Puncture might safely release the gas.

Research on Origins of Lymphatics.—Magnus' remarkable photomicrograms of what he calls the roots of the lymphatics were obtained by distending them with a gas. The gas was the oxygen liberated when hydrogen peroxid came in contact with lymph. They throw light on the mechanism of edema, hydrocele, etc.

Bronchial Fistulas.—Gast remarks that many small bronchial fistulas heal spontaneously and escape discovery. Eight cases are described. Each required individual treatment, and two of the patients sucumbed to the causal disease.

So-Called Progressive Ossifying Myositis.—Löhr concludes from the case of which he gives an illustrated description, that a single type of process is responsible for the typical clinical manifestations. It is not a muscle disease but a multilocular proliferation of connective tissue in periosteum and fascia. Calcification and true bone production follow. Surgical treatment and trauma seem to stimulate to more active ossification. The roentgen rays seem to offer the only possible chance of relief.

Tardy Perforation of Duodenum After Contusion.—Furtwaengler compares a case in a young woman with 123 from the records. He tabulates the details of all these cases. Only fourteen terminated in recovery. The grave symptoms in his case developed suddenly five weeks after the contusion, and a second perforation proved fatal soon after the operative repair of the first.

Acute Edema of the Pancreas.—Zoepffel states that in 10 per cent. of his 115 gallstone operations, he encountered acute necrosis of the pancreas—eight cases in 1921. In four it had not progressed beyond the incipient (edema) stage. In this stage there is a zone of intense tenderness and muscular stiffening in the middle and left side of the upper abdomen due to the primary gallbladder affection. With pronounced necrosis, the symptoms due to this mask the gallbladder affection. In the edema cases the operation followed the first symptoms in from twelve to twenty-four hours, and all recovered. In eight others the interval was two to four days, necrosis was pronounced, and all died.

Ischemic Contracture.—Schubert presents arguments to prove that disturbance in the capillary circulation in the muscle is the primary cause of the contracture. Irreparable damage may be done in a few hours. A circular plaster bandage should never be applied to the arm, and never anywhere if the pulse is not good, especially if there are signs of nerve injury. Treatment can aim only at surgical correction of the contracture.

Operation for Floating Liver.—Kaiser's method of lifting up and supporting the liver from below was summarized in these columns, Dec. 9, 1922, p. 2044. He describes his technic here with fuller details and ten illustrations, and extols its superiority over other methods of hepatopexy.

Incarceration of Intestine in Slit in Mesentery.—Borbe reports three cases of ileus and volvulus from this cause. There was no history of trauma in any instance.

Jahrbuch für Kinderheilkunde, Berlin

November, 1922, **100**, No. 1-2

*Milk-Free Diet for Infants. Moll and Stransky.—p. 3.
*Influenzal Croup in Children. Zschocke and Siegmund.—p. 15.
*Immunization Against Acute Articular Rheumatism. Brunthaler.—p. 34.
*Limits of Intubation. M. Hohlfeld.—p. 42.
Etiologic Diagnosis of Umbilical Tetanus. Zeissler and Käckell.—p. 53.
*Red Cell Sedimentation and Specific Gravity. Opitz and Frei.—p. 55.
*Treatment with Casein. B. Asal-Falk.—p. 61.

*Congenital Syphilis with Symptoms of Ataxia. C. Linder.—p. 65.
Alkalosis and Acidosis. E. Freudenberg and P. György.—p. 86.

Milk-Free Diet in Nutritional Disturbances of Infants.—Moll and Stransky use in cases of nutritional disturbances due to milk, dyspepsia and spasmophilia, a pudding prepared from crackers, sugar and eggs. The pudding is useful for infants, beginning from the third month.

Influenza Croup in Children.—Zschocke describes eleven cases of severe laryngitis in children, due to influenza. Children who were younger than one year died. Of the other cases, 50 per cent. terminated fatally, as also three cases in which stenosis was present before the fourth day of the disease. Intubation may injure the inflamed larynx, and tracheotomy should be resorted to only if there is no hope of relief by other means. Usually it does not help either. Siegmund reviews the necropsy findings.

Active Immunization Against Acute Articular Rheumatism.—Brunthaler used a gonococcus vaccine in five cases of febrile polyarticular rheumatism, because he believes that acute articular rheumatism is caused by a micro-organism kindred to the gonococcus. None of the four children or the one adult developed any heart complications.

Limits of Intubation.—Hohlfeld illustrates, with cases from his clinical experience, different conditions which interfere with the success of intubation. Spasm of the glottis may be a cause, although it can be sometimes overcome by using a smaller tube, after which a larger tube is tolerated. Pharyngeal dyspnea cannot be cured by the intubation, even if the larynx is also affected. If the stenosis reaches very far down, tracheotomy is preferable, although the intubation may help a little by distending the air passages. The tube (especially a small one) may get between the trachea and the membranes.

Relation of Speed of Sedimentation to Specific Gravity of Plasma and Erythrocytes.—Opitz and Frei found that there is no relation in children between speed of sedimentation and the specific gravity of the plasma and erythrocytes. Only in anemia there seems to be some connection with the color index.

Dietetic Treatment with Casein.—Asal-Falk emphasizes the importance of calcium in the treatment with casein. One has to add it eventually to the protein in treatment of dyspepsia in infants and young children.

Congenital Syphilis with Symptoms of Hereditary Ataxia.—Linder's patient presented symptoms of hereditary ataxia and gave a positive complement fixation. Antisyphilitic treatment influenced the condition favorably.

Klinische Wochenschrift, Berlin

Nov. 18, 1922, **1**, No. 47

*Discrimination of Colors. C. v. Hess.—p. 2313.
*"Hygiogenesis." F. v. Gröer.—p. 2316.
*Narcosis and Acidosis. P. György and H. Vollmer.—p. 2317.
*Gout and the Kidneys. F. E. R. Loewenhardt.—p. 2319.
Electrocardiograms Spoiled by Trembling. E. Mosler.—p. 2321.
Action of Blood Vessels. H. Full.—p. 2322.
*Immunity in "Recurrens" and Arsphenamin. A. Buschke and H. Kroó.—p. 2323.
*Diagnostic Cutaneous Reactions in Infants. P. Grosser and K. Keilmann.—p. 2326.
Action of Acid Mixtures of Potassium Iodid and Hydrogen Peroxid on Bacteria. Jacobitz.—p. 2328. Idem in Treatment of Wounds. Urtel.—p. 2330.
*Chromocholoscopy as Test for Liver Function. Hamid.—p. 2332.
Treatment of Staphylomycoses with Horse Serum. W. Rieder.—p. 2333.
Comment on "Iris Heterochromia." S. Sobel.—p. 2333.
Lactase. E. Freudenberg and P. Hoffmann.—p. 2333.
Etiology of Influenzal Pneumonia. G. A. Iwaschenzoff.—p. 2334.
Liver Function in the Striolenticular Complex. R. Stahl.—p. 2334.
Bone Connection Between Vertebrae in Tuberculous Spondylitis. G. Schipporeit.—p. 2335.
Modern Treatment of Leprosy. Olpp.—p. 2336.
Miners' Nystagmus. J. Ohm.—p. 2339.
Active Principles of Ergot. E. Rothlin.—p. 2341. Conc'n.

Discrimination of Colors.—Hess reviews modern methods which enable us to make very exact determinations of the individual ability of color perception.

Hygiogenesis.—Gröer forms this new term in analogy to "pathogenesis." He means by it the mechanism which unites the chemical and physical processes leading to recovery of health.

Narcosis and Acidosis.—György and Vollmer find in narcosis a tendency of the metabolism to acidosis. They attribute it to slowing down of the oxidations.

Gout and the Kidneys.—Loewenhardt finds that persons suffering from gout are able to reach just as high concentrations of uric acid in the urine as healthy people, if not higher. Uric acid is well eliminated even in persons with severe insufficiency of the kidneys. The theory that gout is due to an isolated disturbance of the excretion of uric acid is without sufficient foundation.

Presence of Spirochetes During Immune Phase of Experimental Recurrentis Infection That Had Been Vigorously Treated with Arsphenamin.—Buschke and Kroó publish very interesting investigations on mice which were in the immune stage after an infection with *Spirochaeta recurrentis*. They injected emulsions of different organs of these animals into healthy mice, and found that all of these immune animals had active virus in some organs. It is a remarkable fact that in every case, it was the brain from which even high doses of arsphenamin had not been able to remove the spirochetes. In spite of the presence of spirochetes in the brain, in some of the mice treated with arsphenamin, reinfection (or, to be more exact, superinfection) was possible. These experiments show that, in recurrentis infection, immunity coexists with the presence of parasites, and it is probable that the immunity lasts only so long as they persist. The authors suggest, with all reservations, the probability that immunity against syphilis—by analogy with these experiments—is likewise a manifestation of the latent stage of the disease. There may also be further interesting analogies with the superinfection in the two diseases.

Diagnostic Cutaneous Reactions in Infants.—Grosser and Kleinmann show that some healthy individuals may react to nonspecific substances in the same way as to tuberculin and diphtheria toxin. An intracutaneous reaction of a diameter of less than 10 mm. and a duration of less than seventy-two hours is not necessarily specific.

Chromocholoscopy as Liver Function Test.—Hamid tested in thirty persons the excretion of methylene blue through the bile. There were no differences in the time of its appearance between the healthy and persons with disease of the liver.

Medizinische Klinik, Berlin

Dec. 3, 1922, **18**, No. 49

Treatment of Diabetes. H. Assmann.—p. 1545.
*Trichophytosis on Extremities. A. Alexander.—p. 1550.
*Treatment of Spastic Conditions. H. Kersten.—p. 1553.
Treatment of Abortion. Bandzauner.—p. 1555.
*Arsphenamin Injuries. E. Meyer.—p. 1557.
Primary Chronic Fibrinous Bronchitis. Pappenheimer.—p. 1557.
*Modified Method of Percussion. F. Schlesinger.—p. 1557.
*Rumpel-Leede's Phenomenon. H. Hoffmann.—p. 1558.
Acute Cystitis. E. Portner.—p. 1559.
Recent Literature on Roentgen Diagnosis. O. Strauss.—p. 1560.

Trichophytosis on Extremities.—Alexander describes trichophytosis localized in the palms and soles. The disease can be either typical or it may appear as a simple desquamating dyshidrosis. It can also resemble pemphigus. Alexander was able to cultivate the germ in nine cases out of thirteen, and considers it as *Trichophyton gipseum*.

Treatment of Spastic Conditions.—Kersten publishes two cases of extirpation of one suprarenal capsule. He attributes to the operation an amelioration of the epileptic condition of the patients.

Arsphenamin Injuries.—Meyer describes a case of death due to syphilitic thrombosis of the artery of the right sylvian fissure. The patient had been treated only with mercury ointment. If arsphenamin had been used, the case would possibly have been considered as another injury due to arsphenamin.

Modified Method of Percussion.—Pappenheimer puts the extended middle finger of the left hand on the body at an angle of 45 degrees, and raps on the proximal end of the last phalanx, vertical to the axis of the finger. The sound is weaker than in the classic method, but stronger than in that of Plesch-Goldscheider.

Rumpel-Leede's Phenomenon.—Hoffmann compared the cutaneous hemorrhages after stasis (Rumpel-Leede's phenomenon) in syphilitics and other patients (887 persons in all). There is not much difference in men, while it is more frequent in syphilitic women. The prognostic value of the reaction for arsphenamin injections is minimal, except perhaps in very pronounced cases.

Münchener medizinische Wochenschrift, Munich

Dec. 1, 1922, **69**, No. 48

*Primary Foci, Miliary Tuberculosis and Immunity. Huebschmann.—p. 1654.
Experiments on Treatment of Syphilis with Bismuth. Müller.—p. 1659.
*Aches in Abdomen and Back. H. Albrecht.—p. 1661.
*Treatment of Callous Ulcers of Legs. F. v. der Hütten.—p. 1663.
Percutaneous Application of Tuberculin. F. Hamburger.—p. 1664.
*Hemorrhagic Erosions of Rectum. M. Pfister.—p. 1664.
German Alexander Hospital in Petrograd. W. Schuele.—p. 1665.
Hueppe's Attitude Toward the Racial Question. F. Lenz.—p. 1666.
Polycythemia and Other Splenomegalias. P. Morawitz.—p. 1666.

Primary Foci, Miliary Tuberculosis and Immunity.—Huebschmann reports his experiences in 329 necropsies, and discusses especially the problem of the independence of miliary tuberculosis from the chronic tuberculosis of lungs.

Aches in Abdomen and Back.—Albrecht emphasizes the psychogenous character of these aches. He points out that objective diseases of the female genital organs produce pains only in a very few well known affections.

Treatment of Callous Ulcers of Legs.—Hütten injects normal saline under and around callous ulcers of the leg, and reports favorable results even in cases of long duration.

Hemorrhagic Erosions of Rectum.—Pfister describes a case of rectal erosions resembling aphthae.

Dec. 8, 1922, **69**, No. 49

*Treatment of Ulcer of Stomach. E. Enderlen and E. v. Redwitz.—p. 1683.
*Fatal Roentgen-Ray Injuries of Larynx. F. v. Hofmeister.—p. 1687.
*Comment on "Roentgen Ray Injuries of Larynx." G. Perthes.—p. 1690.
Diagnosis of Anaphylactic Conditions. W. S. v. Leeuwen et al.—p. 1690. See abstract on page 443.
Wound Scarlet Fever. F. Port.—p. 1691.
*Widal's Liver Function Test. R. Nussbaum.—p. 1693.
*Medium for the Gonococcus. F. H. Lorentz.—p. 1695.
Vaccination Against Tuberculosis. F. F. Friedmann.—p. 1698.
*Treatment of Diseases of the Conjunctiva. A. Peters.—p. 1700.

Surgical Treatment of Ulcer of Stomach.—Enderlen and Redwitz considered the results of different operations from the standpoint of their physiologic effect on the digestion. The treatment should be internal as long as possible. Only if all the therapeutic measures fail, the internal treatment may be interrupted and aided by an operation. The authors are opposed to early operation as method of choice. Where operation is indicated, a typical resection is usually the best. Some cases with or without stenosis of the pylorus may require a gastro-enterostomy.

Fatal Roentgen-Ray Injuries of Larynx.—Hofmeister publishes three cases of death due to roentgen-ray treatment of a laryngeal papilloma and two carcinomas. The injury did not appear for a long time (two and one half to three months after the second irradiation). There resulted not only stenosis of the larynx, but also atrophy of the surrounding parts (esophagus, thyroid, salivary glands), and the tissues were so badly damaged that operation led to necrosis, besides being extremely difficult. The doses of roentgen rays were not unusually large. Besides these cases, it is very probable that two others (out of thirteen) were also injured in a similar way. Hofmeister concludes that late injuries after roentgen rays are more frequent than is realized. The absence of a severe reaction during the first four weeks does not prove that the doses were not too high. Not one carcinoma of the larynx has ever been cured by irradiation. Therefore no operable carcinoma and no papilloma should be irradiated.

Comment on Hofmeister's "Fatal Roentgen-Ray Injuries of Larynx."—Perthes points out that only two were operable of the thirteen cases quoted by Hofmeister as mentioned in the preceding abstract. Perthes believes that it is possible to avoid overdosage, and points out the benefits of irradiation for hopeless cases. He cites Beck's patient who had no recurrence for three years, and one of his own patients who is still living in fair condition after two and a half years.

Widal's Liver Function Test.—Nussbaum discusses and recommends Widal's efficiency test of the liver. Although a negative result does not exclude abnormal conditions in the liver, a positive test should lead to very careful study of the case.

Medium for Gonococci.—Lorentz uses an ascites agar containing 0.02 per cent. of lactic acid.

Treatment of Diseases of the Conjunctiva.—Peters points out the fallacy of supposing that different compounds have a specific action on the micro-organisms in the conjunctiva. Gonococci may continue to grow under treatment with silver preparations, while the mucosa returns to a normal condition. Peters saw good results with parenteral injections of proteins.

Wiener klinische Wochenschrift, Vienna

Dec. 7, 1922, **35**, No. 49

*Early Diagnosis and Treatment of Syphilis. K. Ullmann.—p. 951.
*Cure of Trachoma by Radium. L. Müller and F. Högler.—p. 954.
*Meckel's Diverticulum. L. Kirchmayr.—p. 955.
Relations Between the Biologic Reaction to Roentgen Irradiation and Oxygen. E. Petry.—p. 957.
*Bile Acids in Serum and Urine. A. I. Ignatowsky.—p. 958.
Comment on "Hypnotic and Posthypnotic Analgesia." Kogerer.—p. 961.
French Views on Icterus. F. Stöhr.—p. 961. Cont'n.

Early Diagnosis and Treatment of Syphilis.—Ullmann emphasizes the importance of examination of suspicious lesions for spirochetes. The induration of the base is not always present—especially if the seat is not typical.

Cure of Trachoma by Radium.—Müller and Högler report excellent results in five cases of trachoma treated by radium.

Meckel's Diverticulum.—Kirchmayr saw a retrograde invagination occur after resection of Meckel's diverticulum. He recommends therefore resection of part of the intestine, if the base of the diverticulum is broad, or if there is a difference between the lumen of the intestine proximally and distally to it.

Bile Acids in Serum and Urine.—Ignatowsky measures the surface tension with Czapek's capillary manometer, by which the presence of 0.02 per cent. of bile in the fluid can be detected. Oral ingestion of 0.5 gm. of sodium taurocholate is sufficient to lower the surface tension of urine. He gives an illustration of the manometer and commends to the general practitioner this method of detecting the presence of bile acids in the various body fluids.

Zeitschrift für Kinderheilkunde, Berlin

Nov. 17, 1922, **34**, No. 1-4

*Rachitis and Growth. I. F. Wengraf.—p. 1. Idem. II. F. Wengraf and Barchetti.—p. 14. Idem. III. Ambrozic and Wengraf.—p. 24.
*Liver Function Tests in Children. A. F. Hecht and E. Nobel.—p. 42.
*Tuberculosis of Bronchial Glands in Children. H. Langer.—p. 60.
*Stomach Function Tests in Infants. Demuth and Edelstein.—p. 66.
*Rachitis in Infants. Harriette Chick et al.—p. 75.
*Amino-Acid Content of Infants' Urine. F. Goebel.—p. 94.
*Epituberculous Infiltration of Lungs in Children. H. Langer.—p. 142.
*Food Requirement of Children. Y. Chou.—p. 150.
Sugar and Protein in Bacterial Fermentation. F. Müller.—p. 158.
*Eosinophilia in Children. F. Hahn.—p. 165.
Miliary Necrosis of Liver Caused by Bacteria Resembling Spirochetes. M. Kantschewa.—p. 169.
*Clinical Aspect of Flea Bite. J. Hescheles.—p. 177.
*Diphtheria Antitoxin and the New-Born. F. v. Gröer and Progulski.—p. 185.
Rectal Feeding with Carbohydrates in Children. W. Schäfer.—p. 196.
Biology of Intestinal Flora in Infants. VII and VIII. Adam and Kissoff.—p. 207 and p. 213.
*Congenital Occlusion of Common Bile Duct. S. Paul.—p. 216.

Rachitis and Growth.—Wengraf and Barchetti observed five children, aged from 2½ to 5 years, who were undernourished, underweight, and very much smaller than normal children of their age. All of them were rachitic. The children had been previously nourished on a diet which was very poor in fat and proteins. On a diet with sufficient calories but without foods containing vitamin A no weight was gained except for a short period at the start. Leaving the caloric value of the diet unchanged, and adding milk and butter (instead of American hog fat), the children recovered. Four controls treated from the start with milk and butter improved rapidly. With the improvement in growth, the

rachitic changes became better. This shows that an important part of the rachitic symptoms is influenced by vitamin A.

Rachitis and Growth.—Ambrozic and Wengraf made experiments on white rats with vitamin-free food. They were able to demonstrate in the rats the disturbance in the deposition of calcium which is typical of rachitis. The slowing down of growth further resembled human rachitis.

Liver Function Tests in Children.—Hecht and Nobel tested the function of the liver in children. Galactose tests did not give reliable results. Synthesis of camphor-glycuronic acid was constant in six of the children (about 75 per cent.), although less than in adults if the dose was not too high. Three pathologic cases (icterus, liver stasis in pericarditis, and tuberculosis of serous membranes) gave low values.

Spinal Phenomena in Diagnosis of Tuberculosis of Bronchial Glands of Children.—Langer finds that testing for spinal pain is of no value in children. D'Espine's sign is instructive. He believes that percussion of the spine is important and valuable in the first years of life, especially if one looks also for dulness on the first three dorsal vertebrae as well as on the fifth.

Stomach Function Tests in Healthy Infants.—Demuth and Edelstein tested the effects of different components of milk and of added sugar on the stomach of infants. The time needed for disappearance of food from the stomach was determined chiefly by the amount of casein, both with human and cow's milk. There was no difference in the action of these substances on the acidity of the gastric juice in young infants. In older children, casein decreased, fat increased the acidity.

Rachitis in Infants.—Translation from *Lancet*, July 1, 1922.

Amino-Acid Fraction of Infants' Urine.—Goebel confirms the fact that infants excrete comparatively more amino-acids than adults. The proportion is still greater in prematurely born infants. Yet the amount of amino-acids in the blood is the same as in older children, and Goebel concludes that the increased elimination is due to a peculiarity of the kidneys. This theory is confirmed by the fact that the elimination of amino-acids in infants is increased by increasing the amount of urine. An increase in the amount of amino-acids may occur in alimentary intoxication, but it is not the rule.

Epituberculous Infiltration of Lungs in Children.—Langer observed in a tuberculous child, after the injection of tuberculin, fever and spreading of a previously resorbed infiltration of the lungs. The infiltration disappeared again. He considers it as a typical focal reaction, and believes that the benign infiltrates studied by Eliasberg and Neuland are specific, though he confirms the possibility of their disappearance.

Food Requirement of Children.—Chou studied sixty-nine children, aged from 2 to 14 years. Pirquet's formulas for infants proved to be correct even for older children.

Eosinophilia in Children.—Hahn attributes the frequency of eosinophilia (over 6 per cent.) in children chiefly to the great instability of their blood, and the frequency of the exudative diathesis, and of infections (including intestinal parasites). He found an increase in eosinophils in diphtheria, and attributes it to the injections of antitoxic serum.

Clinical Aspect of Flea Bites.—Hescheles studied the reaction of the skin to flea bites. Three quarters of the persons showed the usual maculo-hemorrhagic form, one quarter an urticarial type. This was due to the individual reaction, and not to differences in the fleas.

Action of Diphtheria Antitoxin on the New-Born.—Gröer and Progulski examined the action of specific antidiphtheric and nonspecific serums on eight new-born babes with a positive Schick test. They found that these babes react specifically and in the same way as adults.

Metabolism in Case of Congenital Occlusion of the Common Bile Duct.—Paul found in a case of aplasia of the gallbladder and choledochus a very low excretion of ammonia and an increased excretion of amino-acids. Fats were well split, because of normal function of the pancreas, but their resorption was very small.

Zeitschrift für Tuberkulose, Leipzig

November, 1922, **37**, No. 2

*War Epidemiology of Tuberculosis. Redeker.—p. 89.
Action of Poisons of Tuberculosis. E. Schulz.—p. 100.
*Leukocyte Formula in Tuberculous Children. C. J. Raffauf and Grimm. —p. 107.
*Staining of Tubercle Bacilli. R. Lommatzsch.—p. 112.
Apparatus for Disinfection of Sputum in Homes. W. Block.—p. 126.
Transactions of Thirteenth Yearly Convention of Association of Physicians in Tuberculosis Sanitariums.—p. 128.

War Epidemiology of Tuberculosis.—Redeker gives a very critical paper on the war statistics of tuberculosis. He believes that the increase in the mortality of children from tuberculosis in Germany is due to the increased frequency of infection, not to undernourishment. The latter makes the disease only more manifest.

Differential Leukocyte Count in Tuberculosis of Bronchial Glands and Lungs in Children.—Raffauf and Grimm examined the blood of sixty-five tuberculous children. They presented changes similar to those in adults. Lymphocytosis and eosinophilia are favorable signs.

Staining of Tubercle Bacilli with Dyes for Fats.—Lommatzsch gives a very extensive review of the staining of tubercle bacilli. He tried different lipoidophil dyes, but the results were negative except with a solution of aniline and nile blue. This solution stained *Bacillus coli* equally well.

Zentralblatt für Gynäkologie, Leipzig

Nov. 18, 1922, **46**, No. 46

Injection of Living Gonococci in Gonorrhea. A. Loeser.—p. 1825.
Abdominal Pregnancy with Viable Child. E. Brugnatelli.—p. 1831.
*Protein Therapy in Febrile Abortion. W. Simon.—p. 1837.
*Atonic Hemorrhages in Cesarean Section. W. Sigwart.—p. 1840.
Forceps in Relation to Child Mortality. F. Heinlein.—p. 1843.
Time Required for Polypous Myomas to Develop. H. Becker.—p. 1847.
*Treatment of Dysmenorrhea. H. Gänssbauer.—p. 1849.

Protein Therapy in Febrile Abortion.—Simon reports the results of parenteral injections of protein in 30 cases of febrile abortion. There were no deaths. Nineteen were incomplete abortions with more than 38.4 C. rectal temperature, the beginning hemorrhage having occurred only three days previously. Only two patients had had fever for more than two days. In five other groups of 30 cases each the average number of days of fever was 4.2; 3.7; 6.1; 3.6 and 4.2, while in the group treated with the protein injections the average course of the fever was 3.1 days. He applied the protein therapy also in 26 cases of septic puerperal affections. There were 4 cases of transverse positions, 2 cases operated on elsewhere, 4 cases of vaginal cesarean section, one case of forceps delivery with eclampsia, 7 cases of fever after spontaneous birth, 2 induced premature births and 5 abortions with complications. Two cases resulted fatally, one case in which an operation had been performed elsewhere and one other case in which the fever had followed a spontaneous birth. His experience leads him to recommend injections of protein in sepsis and especially in febrile abortion.

Use of Ether to Combat Atonic Hemorrhages in Cesarean Section.—Sigwart reports that he has found ether efficacious in stimulating an atonic uterus and bringing about a normal contraction. The ether (50 c.c.) may be poured into the uterus or the surface of the uterus may be swabbed with the ether. He cites cases of interrupted pregnancy and cesarean section in which severe hemorrhage from inertia was promptly checked by the use of ether.

Treatment of Dysmenorrhea. — Gänssbauer describes Beckh's method of inducing prolonged dilatation of the cervix and the cavum uteri in the treatment of idiopathic dysmenorrhea, and in dysmenorrhea in nulliparas with abnormally small uterus. For the dilatation he uses glass rods 5 cm. in length which have the form and thickness of Hegar dilators Nos. 4 to 6. The dilatation is first effected with Hegar dilators, up to size No. 13, or at the most 14. The thickest glass rod is then introduced and held in place by tampons in the vagina. The glass rod remains for about a week. During the application of this technic, elevation of temperature was not observed and recurrences were very rare. He says that during the primary dilatation, before the introduction of the larger Hegar dilators, it is well to make shallow incisions in order to prevent deep laceration of the cervix.

Casopis Lékaruv Ceskych, Prague

Nov. 25, 1922, **61**, No. 47

*Turpentine in Treatment of Adnexa. J. Tuma.—p. 1121.
*Epituberculous Infiltration in Children. J. Mourek.—p. 1124.
Diagnosis of Pituitary Tumors. J. Kurz.—p. 1126. Conc'n.
Survey of Italian Otorhinolaryngology in First Half of 1922. K. Kunc. —p. 1131. Conc'n No. 48.

Treatment of Adnexal Affections with Turpentine Oil.—Tuma reports comparatively favorable results with injections of solutions of turpentine oil in olive oil under the glutei. The method proved useful in exudative and purulent affections of the adnexa.

Epituberculous Infiltration in Children.—Mourek discusses cases belonging to the group described by Eliasberg and Neuland in small children. The physical signs are an intensive dulness, usually over one upper lobe, and loud bronchial breathing, with few râles. The history and tuberculin reaction point to tuberculosis. Yet there are no tubercle bacilli in the sputum, the temperature is usually normal, and the children look well and gain in weight. After a time all symptoms disappear. Mourek discusses the process, and concludes that the affection is best considered as scrofulosis.

Dec. 2, 1922, **61**, No. 48

New Form of Supporting Tissue in Invertebrates. Z. Frankenberger. —p. 1145.
Acute Retention of Urine with Hypertrophied Prostate. V. Janecek.—p. 1149.

Dec. 9, 1922, **61**, No. 49

*Blood Picture in Treatment of Adnexitis. M. Premrou.—p. 1169.
Congenital Metatarsus Varus. A. Sebek.—p. 1176.
Hysteresis During Inanition. A. Svoboda.—p. 1179.

The Blood Picture as Guide to Treatment of Adnexitis.—Premrou finds that the best prognosis is in cases of neutrophil leukocytosis which disappears in two or three days, while the number of eosinophils increases. Absence of a marked leukocytosis and disappearance of eosinophils mark chronic cases which are not suitable for injections of turpentine oil.

Naval Medical Association Bulletin, Tokyo, Japan

July, 1922, No. 36

*Acidosis Among Stokers in Tropics. B. Abe et al.—p. 5.
Experimental Studies on Medication of Calcium Preparations. K. Wakatsuki.—p. 6.
*Three Cases of Appendicitis Caused by Ascaris. S. Hattori.—p. 7.
Bacillary Dysentery on Board H. M. S. Yakumo. A. Tanaka.—p. 8.
On Eighty-Nine Cases of Influenza in January, 1922. A. Tanaka.—p. 9.
Studies on Size of Markers for Determination of Visual Field. H. Nakagawa.—p. 10.

Acidosis Among Stokers.—According to Abe, Fukui and Imai, acidosis among stokers may be prevented by administration of 1.0 gm. sodium bicarbonate after two hours' work.

Appendicitis Caused by Ascaris.—Among seventy-nine cases of appendicitis, Hattori found three cases (3.8 per cent.) due to the ascaris, which had wandered into the cavity of the appendix.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

Nov. 18, 1922, **2**, No. 21

*Pseudo-Hermaphrodism as Cause of Sterility. Wesselink.—p. 2251.
*Influence of Spleen on Erythrocytes. Bolt and Heeres.—p. 2259.
*The Anemia with Sprue. C. Elders.—p. 2267.
*Diagnosis of Diseases for Which Anaphylaxis is Responsible. W. S. van Leeuwen et al.—p. 2276.
Arteriomesenteric Occlusion of the Intestines. H. L. Coopman.—p. 2280.
Osteochondroma of Forefinger. J. F. O. Huese.—p. 2284.

Pseudohermaphrodism as Cause of Sterility.—Wesselink relates that as women of a masculine aspect are sought less in marriage, their tendency to sterility has not attracted attention hitherto. He describes eight cases, however, in which, when consulted on account of sterile wedlock, he found evidences of pseudohermaphrodism, with tardy and scanty menstruation, and a masculine growth of hair on the body.

Influence of the Spleen on the Erythrocytes.—Bolt and Heeres present evidence that the osmotic resistance of the erythrocytes is reduced in the spleen. The resistance to saponin is increased. They discuss the relation between these facts, and the ratio between cholesterol and phosphatids.

Etiology of Pernicious Anemia.—Elders' tabulated data of anemia in sprue confirm the pernicious type of the anemia in these cases. They suggest that pernicious anemia can be explained better by the assumption that a deficiency factor rather than a toxic factor is mainly responsible.

Diagnosis of Anaphylactic Nature of Diseases.—Van Leeuwen, Bien and Varekamp noted that 67 per cent. of forty-nine patients with asthma responded positively to diagnostic tests with scales from the skin of horses; 53 per cent. of thirty reacted to dog hairs and 39 per cent. of thirty-six to rabbit hairs. Circumstances rendered it extremely improbable that all these persons reacting positively had actual contact with horse scales, dog hair or rabbit hair. Hence they concluded that the hypersensitivity was to skin in general. Tests based on this assumption were positive in 95 per cent. of asthma cases. They call attention to this as a simple, harmless and instructive means for detecting those whose asthma, migraine, epilepsy, etc., are traceable to abnormal sensitivity to some substance which does not affect normal persons. The test extract is made with dandruff scales, ground with ether. After evaporation of the ether, the scales are extracted by ten volumes of a solution containing 0.5 per cent. sodium chlorid and 0.4 per cent. sodium bicarbonate for two days under toluol. The extract is preserved with 0.5 per cent. phenol. Intracutaneous injection of salt solution containing 0.5 per cent. phenol serves as a control. Some extracts contain toxic substances and must be discarded. The test in the normal was constantly negative. They urge dermatologists and neurologists to apply this test extensively in skin diseases, epilepsy, etc. By its use cases can be detected in which desensitization may cure the disturbances. Tuberculin or parenteral injection of milk may accomplish the purpose. With the possible exception of hayfever, it will probably be rarely necessary to resort to the specific protein involved.

Nov. 25, 1922, **2**, No. 22

Treatment of Abortion. J. A. van Dongen.—p. 2346.
*Experimental Compression of Heart. G. van Rijnberk.—p. 2355.
*Determination of Acidity of Stomach Content. H. Vos.—p. 2364.
*Research on Hypnosis. S. Koster.—p. 2370.
Chronic Arsenic Poisoning. M. Elzas.—p. 2383.
*Death of Fetus. P. A. de Wilde.—p. 2386.
Cancer and Heart Disease in Married and Unmarried Women at Rotterdam. D. E. Schouten.—p. 2406.

Experimental Compression of the Heart.—Van Rijnberk discusses the interpretation of the tracings and other findings obtained by connecting the interior of the dog pericardium with a recording drum. He then applied pressure with and without a metal plethysmograph.

Estimation of Acidity of Stomach Content.—This communication from the laboratory for physiologic chemistry in charge of Ringer, presents evidence that Günzburg's reagent is a reliable indicator of the free acid or hydrogen ions so long as the acidity is not below p_H 2.1. The stomach content must not be filtered. Vos tabulates the findings with various methods of analysis in forty-eight solutions of hydrochloric acid and peptone of varying strengths.

Research on Hypnosis.—Koster tested with the ergometer the subject's muscular strength and then repeated the test after hypnotism and the suggestion of extreme strength. These and similar tests of the sense of touch during suggestion under, and subsequent to, hypnosis provided objective findings for estimating the effect of suggestion.

Causes of Death of Fetus.—De Wilde reports three cases which suggest that, when syphilis and kidney disease can be excluded, an abnormally long umbilical cord may be responsible for the death of the fetus.

Dec. 2, 1922, **2**, No. 23, Pasteur Centennial Number

*The Netherlands' Tribute to Pasteur. J. J. van Loghem.—p. 2442.
Pasteur Day in the Netherlands. P. Muntendam.—p. 2443.
Pasteur's First Research. F. M. Jaeger.—p. 2447.
Pasteur, the Founder of Microbiology. A. J. Kluyver.—p. 2457.
Importance of Pasteur's Work for Medical Science. C. H. H. Spronck. —p. 2466.
Influence of Pasteur's Work on Progress of Civilization. A. Calmette. —p. 2480.
Louis Pasteur. 1822-1922. E. Cohen.—p. 2490.

The Pasteur Centennial.—The Netherlands Medical Association appointed a committee of twenty persons to arrange for celebration of the Pasteur centennial. The main celebra-

tion was at Amsterdam, and the addresses are reproduced in this Pasteur number. Calmette, subdirector of the Pasteur Institute at Paris, closed the list, and the committee presented him with an album recording the persons, institutions and societies that had participated in the "Pasteur day."

Dec. 9, 1922, **2**, No. 24

*Dietetic Treatment of Diabetes. J. T. Peters.—p. 2568.
*Familial Splenomegaly. P. H. Kramer.—p. 2585.
History of Collegium Medicum. A. J. van der Weyde.—p. 2600.
A Seventeenth Century Dentist. G. H. Bisseling.—p. 2608.
A Medieval Hospital. M. H. Cohen.—p. 2621.
*The Auenbrugger Bicentennial. M. Neuburger.—p. 2623.
History of Medicine at Centennial of German Society for the Advancement of Science. Van Andel.—p. 2635.
Prophylaxis of Influenza. H. A. Molema.—p. 2649.

Dietetic Treatment of Diabetes.—Peters suggests as a working hypothesis that diabetics have more reserve carbohydrates in their tissues than normal persons. Hence, during periods of fasting, these reserve carbohydrates can serve as antiketogenous substances. This would explain why diabetics excrete less ketonic acids in the urine during fasting than normal persons under similar conditions. Modern treatment limits the ration to about 30 calories to the kilogram. Peters tries to banish the glycosuria by merely reducing the intake of food, especially of fat. If the glycosuria does not subside in two days of this regimen, he reduces the intake still further, and after two days resorts to absolute fasting. Only in very severe cases, in comparatively strong patients, is it advisable to begin at once with the fasting. During this fasting, he allows weak coffee, weak tea and weak bouillon at will, and the patient is kept in bed or lying down. One woman had acetone and 8 per cent. of sugar in the urine. On restriction to 332 calories (no fat; carbohydrates 46, and protein 37), for two days, and then complete fasting for two days, the glycosuria disappeared and did not return when 118, 158 and 250 calories were allowed. At 740 calories, 1 per cent. sugar appeared. The carbohydrates were then reduced from 52 to 40, with 61 protein, and fat was increased from 32 to 155. The calories were then increased to 1,803, and there had been no return of the glycosuria or acetone on this diet two months later. This diet corresponded to 30 calories per kilogram.

Familial Splenomegaly.—Kramer remarks that the brothers and sisters of patients with splenomegaly should be examined. In the family he describes, splenomegaly in the women, aged 20 and 26, and in the boy, aged 14, had been known for nine to thirteen years. All gave a constantly high leukocyte count. In De Lange's case, the splenomegaly was pronounced in four of the seven children in the family. Two were treated by splenectomy in 1916, and have been free from disturbances since. Three persons treated by splenectomy in 1909 and 1912, in another Rotterdam family of eleven children, are also well. The indications with familial splenomegaly are to temporize, and to remove the spleen if the disturbances increase.

The Auenbrugger Bicentennial.—This issue of the *Tijdschrift* contains not only a number of historical articles, but most of the abstracts are from periodicals devoted to the history of medicine.

Norsk Magazin for Lægevidenskaben, Christiania

December, 1922, **83**, No. 12

*Treatment of Prolapse of the Uterus. H. Natvig.——p. 945.
*Traumatic Ossifying Myositis. P. Bull.—p. 992.
*Conjugal Pulmonary Tuberculosis. A. de Besche and Jørgensen.—p. 1000.
*Bronchial Spirochetosis. H. Engelsen.—p. 1016.
*Motor Symptoms. G. H. Monrad-Krohn.—p. 1018.

Treatment of Extensive Genital Prolapse.—Natvig gives an illustrated description of his method, which he calls anterolateral hiatopexy with antesuspension of the interposed body of the uterus. He uses a strong fold of mucous membrane in the vagina, which encloses a stout band of connective tissue, to sustain the uterus when brought up into the interposed position. The antesuspension is accomplished by shortening the broad and round ligaments. The needle is passed through the tissues behind the descending ramus of the pubis, and through the body of the uterus. The suture thread thus embraces the stout fold of connective tissue, the *plica angularis vaginae*.

Traumatic Ossifying Myositis.—The various stages of this affection are shown in the roentgenograms of Bull's four cases. The patients were two young men, one young woman and a boy, aged 14. The traumatisms had occurred during a football game, skiing, snowballing and from knocking the arm against a door-knob. The interval which elapsed before the secondary changes developed from the traumatic hematoma and the subjects applied for treatment, was from three weeks to several months. In one case the bone had been fractured; in another some muscle fibers had been lacerated. Sarcoma had been diagnosed in three cases.

Conjugal Pulmonary Tuberculosis.—Only thirty-nine cases of pulmonary tuberculosis in both husband and wife were found among 742 married couples who had been reported as suffering from pulmonary tuberculosis (notification is compulsory in Norway). Analysis of these thirty-nine cases of conjugal tuberculosis showed that, in a large proportion, the parties had lived in a tuberculous environment before marriage and some had shown signs of tuberculosis before marriage. Only eleven instances were found in which the probabilities were in favor of the disease having been contracted in wedlock. These cases form 1.48 per cent. of the total.

Bronchial Spirochetosis.—The chronic bronchitis of three months' duration in a man, aged 26, had been supposed to be of tuberculous origin, until Castellani's spirochetes were found in the sputum. Under treatment with Fowler's solution, recovery was soon complete.

Motor Symptoms.—Monrad-Krohn reviews recent literature on movements and their disorders.

Ugeskrift for Læger, Copenhagen

Dec. 7, 1922, **84**, No. 49

*Rapid Test for Sugar in Blood. J. Christiansen.—p. 1703.
*Results of Tonsillectomy. F. Norsk.—p. 1708.
Intussusception in Young Woman. H. Thorborg.—p. 1716.
*Hemoglobin-Corpuscle Ratio. A. Norgaard and H. C. Gram.—p. 1721.

Rapid Test for Sugar Content of the Blood.—Christiansen recommends the technic he describes as accurate enough for practical purposes in examining diabetics. His table of the findings in 100 cases shows that they parallel the findings with the Hagedorn test. He precipitates the albumin with the Folin technic, and then compares the reducing power for methylene blue with that of known solutions of glucose. A still more rapid method is to heat 5 c.c. of the Folin filtrate with 5 c.c. of 10 per cent. sodium hydroxid. In the presence of sugar, a yellow or brown tint appears. This test takes only five minutes. It was constantly negative in thirty nondiabetic subjects.

Consequences of Tonsillectomy.—Norsk has investigated the present condition of 229 adults whose tonsils had been removed between 1910 and 1919. He was able to reexamine personally 72 of them. The tendency to peritonsillar abscess did not persist after the tonsillectomy in 94 per cent., and was much reduced in 6 per cent.; the tendency to acute tonsillitis disappeared in 84 per cent. and was much reduced in 9 per cent. Fourteen patients with febrile rheumatism, probably of tonsil origin, have had no recurrence of the rheumatism. In 35 of 144 cases adenoid tissue developed anew in the tonsil region. The singing voice was modified in some and this suggests the need for caution with tonsillectomy in professional singers. Acute pharyngitis with a slight general reaction has occurred frequently in 40 of the patients. This tendency to pharyngitis had probably before been masked by the tonsillitis. One case confirms the liability for tonsillectomy to activate a latent infection. In this case the operation was followed by sepsis with joint and heart symptoms, which incapacitated the patient for several years. Similar cases have been recorded by others. Sepsis following tonsillectomy proved fatal in Mackenzie's case.

Ratio Between Hemoglobin and Corpuscles.—The investigation of ten healthy men and ten healthy women demonstrated that the ratio between hemoglobin and the number and size of the corpuscles was remarkably constant in both men and women. The quotient and index show no essential differences between the sexes.